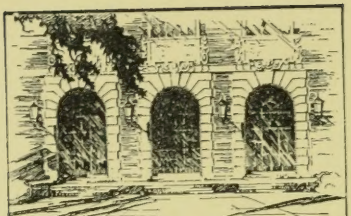
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GOLDEN-CROWNED KINGLET.
(Regulus satrapa, Licht).
Life-size.

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NATURE NEIGHBORS

Embracing

BIRDS, PLANTS, ANIMALS, MINERALS

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VOL. VI—BIRDS

AMERICAN AUDUBON ASSOCIATION
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Birds

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CHAPTER XX

CREEPERS

Kinglets, Chickadees, Verdins, Nuthatches, Gnatcatchers, Titmice, and Creepers all search for insects about trees, particularly along the trunks. Others hop nimbly from branch to branch, catching insects in the air.

The brown creeper is the only true form inhabiting North America. It has stiffened tail feathers, which it uses as a prop, as do woodpeckers.

Nuthatches are more adept at climbing, as they move along the branches and down tree trunks head first, a feat which creepers and woodpeckers do not attempt. Titmice, or chickadees, and nuthatches are resident the year round in a given locality. They belong to different sub-families.

The family Paridæ comprise the two sub-families, Sittinæ, or nuthatches, and Parinæ, or chickadees. Four of the twenty species of nuthatches are American. All are climbers, but they climb downward, head first, as well as upward. They do not use the tail as a prop. The name comes from their method of placing nuts in crevices and hacking or hatching them by pounding with the bill while head hangs downward. Thirteen species of chickadees are found in North America. Chickadees seem poorly fitted to cope with our severe winters, having weak bills and being largely insectivorous. Both nuthatches and chickadees are some-

what migratory at northern limit of their range, but are usually resident where found.

Kinglets and gnatcatchers are our smallest American birds, with the exception of the humming-bird. Our most common American forms are the ruby and golden-crowned kinglets, blue-gray gnatcatchers, and verdin. They are active little birds, flitting about in search of insect food. Kinglets are partial to coniferous trees during the breeding season. While kinglets and chickadees seldom attach themselves to the tree trunks, they may often be seen hanging downward at the extreme end of a branch.

BROWN CREEPER

The Brown Creepers summer from Maine to Montana and northward to the fur countries. Occasionally they appear in the mountainous parts of Pennsylvania and New York, and they have always been observed nesting in the river bottoms near St. Louis, Missouri. They winter in southern United States generally.

The shape of the bill is like that of our wrens, which enables the birds to extract from the inner crevices of the bark various insects and their larvæ and eggs, thus making them of great economical value to the horticulturist. They do not attempt to excavate or burrow into the softest wood, but usually confine themselves to living trees covered with rough bark. The tail is long and the feathers are stiff and pointed, as it is used for support. He does not progress after the manner of the kinglets or nuthatches, but throws his head back, hops upward, moving both feet in unison.

BROWN CREEPER.
(Certhia familiaris americana).
Life size.

WHITE BREASTED NUTHATCH.

The nests are an accumulation of bark strips, grass, and feathers snugly tucked away under the loose bark on the perpendicular trunk of a tree, which may be standing on the edge of a dense woods or near a little lake.

The eggs are pure pearly white, thickly dotted about the larger end with bright reddish specks.

WHITE-BREASTED NUTHATCH

The White-breasted Nuthatch is a resident of eastern North America from Canada to the Southern States, breeding throughout the range.

Nuthatches are equally good at climbing or creeping. They are the only American birds which attempt to travel any distance down the trunk of a tree or the under side of a limb head downward. They do not brace themselves with the tail, as do the woodpeckers and creepers. They are hardy birds, spending twelve months of the year in a good locality. During the coldest weather they wander through the trees of our parks and orchards in company with the chickadees and downy woodpeckers. Like the latter, they have been improperly called sapsucker.

The birds are very handsomely colored with bluish-gray above, excepting the crown of the head, which is black. The breast is white. The call is a nasal note reminding one of the quack of a female duck.

Probably few birds are more beneficial to the fruit grower because of their feeding habits throughout the year. They destroy insects and their eggs obtained from the crevices in the bark and from the under side of green leaves.

They may be attracted about homes and orchards by putting suet out for them, and so set these industrious birds at their winter task of destroying insects and their eggs where such service avails most.

A knothole in a living tree is a favorite nesting site. Sometimes, however, the birds accept the deserted excavation of a downy woodpecker. Feathers, hair, and dry leaves are crowded into the cavity, and in April from four to nine eggs are laid. They are pure white and handsomely spotted with lilac and reddish-brown.

RED-BREASTED NUTHATCH

The Red-breasted Nuthatch is migratory in the Great Lakes region, passing the summer months from northern Maine to southern Manitoba, thence northward into the timbered region of Canada. In the Alleghanies and in western United States they have occasionally been found breeding in the mountainous regions at an altitude which would correspond to our Canadian climate. They winter from about southern breeding range south.

It is interesting to watch this nuthatch constructing a little cavity for a nesting site, usually in a white birch or poplar stub. Mr. Manly Hardy, who studied the habits of this bird in Maine, writes that in making the entrance to the nesting cavity proper the birds perforate the bark in a circle with smaller holes and then take out the center piece. A strange fact concerning the nests found by Mr. Hardy and others is that the bark at the entrance is coated with fir balsam or pitch from an inch to four inches around the

RED-BREASTED NUTHATCH.
½ Life-size.

BROWN-HEADED NUTHATCH
(Sitta pusilla.)
Life-size.

hole. In one instance the pitch extended down for twenty-one inches and was stuck full of the red breast feathers of the nuthatches. The nesting cavities are about four inches in depth.

Four to six white eggs, thickly spotted with reddish-brown, are laid on a little nest of fine grass.

THE BROWN-HEADED NUTHATCH*

The nuthatches, like the woodpeckers, are climbers, but, unlike the latter, they climb downward as well as upward and with equal facility. Their tails are very short, and are not used for support. Their bodies also do not touch the tree "unless they are suddenly affrighted, when they crouch and look, with their beaks extended, much like a knot with a broken twig to it." A sudden clapping of the hands or a sharply spoken word will often cause a nuthatch to assume this attitude. They are busy birds, yet they are seldom too absorbed in their work of gathering food to stop and closely scrutinize an intruder. "Few birds are easier to identify; the woodpecker pecks, the chickadee calls 'chickadee,' while the nuthatch, running up and down the tree trunks, assumes attitudes no bird outside of his family would think of attempting."

They do not always seek their food in the crevices of the bark of trees, but, flycatcher-like, will fly outward from their perch and catch insects on the wing.

The Brown-headed Nuthatch is abundant from Louisiana and Florida to the southern part of Maryland. It also strays, at times, farther north, for it has been taken in

Illinois, Michigan, and Ohio. In the pine woods of the Southern States it passes a happy existence, always chattering in bird language even when its head is downward.

For its nest it selects a suitable hole in the trunk of a tree, or in a stump, that is usually not far from the ground. This it lines with grasses, fine, soft fibers, and feathers. Here are laid about six creamy-white eggs that are spotted with a brownish color. The parents are attentive to their young and seldom associate with others of their kind till these family cares are finished. Then they become more sociable and are found in companionship not only with other brown-heads, but also with woodpeckers, warblers, and chickadees.

TUFTED TITMOUSE

The Tufted Titmouse ranges throughout eastern United States, breeding from the Gulf to southern Iowa and New Jersey, and is resident throughout the breeding range.

Richard C. Harlow writes of tufted titmice: "The course of streams seems in a large measure to determine their distribution, as they are usually to be found in the vicinity of water.

"Apparently the coldest winter has no effect on them, as they seem just as contented among the February snows as in the May sunshine. In the winter they may frequently be noticed in company with nuthatches and downy woodpeckers, for whose society they show a pronounced liking. Like these birds, too, the titmice are of great economic value, as food of all these species is insectivorous. Titmice are usually found in pairs, and are, I believe, mated

TUFTED TITMOUSE.
(Parus bicolor).
About Life size.

throughout the year. The tufted tit is one of our few birds on whose voice the winds of winter seem to have no effect. Their loud, pleasing whistle may be heard at all seasons, especially in the early spring. It is interesting to note that the female tit can sing as well as the male. The tufted titmouse has four distinct notes, the one usually heard being the whistle already referred to, a loud, clear 'peto, peto, peto,' the note being repeated from three to seven times, usually four or five. This is occasionally varied, but the intonation is essentially the same. Another note frequently heard is a 'sic-a-dee,' something like that of the chickadee, though noticeably louder. They also have a third, a low-murmured 'dee-dee-dee,' which I have only heard at the nest or in the near vicinity of the same. The last, but not least, use to which their vocal chords are put is a distinct, snake-like hiss uttered by the female when the nest is threatened.

"I was attracted by a low, peculiar 'dee, dee,' quite different from any note I had previously heard. In a moment I had traced the sound to a tit at the entrance to its nest. A large catalpa tree leaned over the creek at this point at an angle of forty-five degrees, and up about fifteen feet, directly over the water and on the upper side of the trunk, was a knothole. The bird was at the entrance to this and in the act of placing some morsel in the bill of its mate within. In a moment I was on my way up the trunk, with my eyes glued to the hole. Each moment I expected the female to leave, but in this I underestimated her courage. Looking within, I was greeted with her peculiar hiss, but as she sat close and I was unable to insert my hand in the small

cavity, the contents were a mystery. Ten minutes later I had succeeded in borrowing a hatchet from the shanty of a gentleman of color and was again at the tree. The cavity was soon enlarged and I inserted my hand. On seeing my hand, however, she concluded that it was time to act, and she went at me bill and claws. I was hoping for a set of eggs, but imagine my disappointment when I finally discovered the contents to be one newly hatched bird, six hatching eggs, and an infertile one, which I took, and left the anxious birds in possession of their home. I paid several visits to the place after this and learned that the young of these useful birds were fed to a large extent on larvæ. They left the nest just eleven days after the eggs were hatched."

CHICKADEE

The Chickadee ranges throughout eastern North America, breeding from southern Illinois and Pennsylvania and south along the mountains, northward. Though usually resident the year around where found, in winter it migrates a short distance below the southern limits of its breeding range. It is a very bold and interesting little fellow. When the snow is on the ground and the timber land is almost void of bird life, a small band of chickadees may be seen moving freely through the undergrowth, usually accompanied by one or two woodpeckers and perhaps a white-breasted nuthatch. These birds during cold days will eat from the hand without hesitation. Many bird-lovers attract them to their dooryards by placing bread crumbs and grain on the doorsill, also by hanging up beef suet.

CHICKADEE.
About Life-size

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CAROLINA CHICKADEE
(Parus carolinensis
Life-size

Originally the chickadees subsisted almost entirely upon minute forms of animal life, but in recent years they have become quite omnivorous and take readily to the finer grains and berries. The birds are of great importance to the horticulturist, as they take from the cracks of the bark countless numbers of insects and their larvæ and eggs. While they may not reach the orchard and shade trees until after the breeding season, they are diligent and get in their work when they do arrive. Like the kinglets, chickadees are true acrobats and move from limb to limb head down with almost as much ease as the true creepers, which are the nuthatches.

The timber along river bottoms or old stumps on the edges of clearings are favorite nesting sites. Sometimes the nest is constructed in a natural cavity, but usually an abandoned woodpecker's hole is warmly lined with hair and feathers. In this six to ten white eggs, heavily speckled with rich reddish-brown, are laid. Nest building begins early in May and the young hatch in ten days. Both parents assist in the duties of incubation and in caring for the young. It is estimated that a pair of chickadees average 275 trips a day in caring for their brood.

THE CAROLINA CHICKADEE*

As one walks through the forest, either in winter when the snow is deep, or in summer when the sun is highest, the stillness will be broken from time to time by the merry "Chicka-dee-dee," "day, day," or "hey-de, hey-de," coming from a little throat only a few feet away.

The Carolina Chickadee is very similar to the black-

capped chickadee, with the exception that it has a decidedly shorter tail. Its range is also different, being seldom found north of a line extending from New Jersey through central Indiana, west to Texas and Indian Territory. The black-capped is seldom found south of this line.

The nest of this bird is a very cozy affair sheltered in a hollow snag or post. It often takes advantage of the deserted home of a downy woodpecker to make its nest. It also frequently excavates a cavity in some rotten snag or tree trunk. As soft wood is preferred, one generally finds the nest in a willow snag. The nest is a beautiful, soft affair, composed of hair, feathers, down, etc., and contains five to eight small pinkish-white eggs, spotted with reddish-brown most profusely at the larger end.

The chickadee is one of the farmer's best friends. During the egg-laying season of the canker-worm moth it destroys a great many eggs. Examination of the stomach contents shows between 200 and 300 canker-worm eggs in each. It has been estimated that each of these birds destroys 14,000 of these eggs during the month of egg-laying. The chickadee has been accused of destroying the buds of fruit trees, but this is not substantiated. It has been found that whenever it attacks a bud it does so to secure the worm which has burrowed into the center.

These birds are doubly useful because they remain with us the entire year and continue their destruction of eggs and larvæ. The amount of work done by a pair of these birds in destroying eggs and larvæ of injurious insects is more than could be accomplished by any man. They should, therefore, receive the greatest protection possible.

BUSH TIT.

THE BUSH-TIT*

The Bush-Tit, or Least Tit-mouse, belongs to the large bird family, Paridæ. The species of this family are represented by the titmice, nuthatches, and chickadees. In distribution the family is quite cosmopolitan, and contains several species that are noted for the peculiar and beautiful nests that they build. The majority of the species, however, choose, as a site for their home, holes in trees or in fence rails and posts, or in the timbers of old buildings. These cavities are neatly and warmly lined with a thick matting of vegetable down, animal hair, and feathers. The homes of the true titmice are found in such places.

The bush-tits of the Pacific Coast of the United States, as well as nearly all the other species of long-tailed titmice, build wonderful nests which are pensile and exceedingly large when the size of the birds is considered. Minimus, the specific name of the bush-tit which we illustrate, is an appropriate name, for the bird is scarcely larger than our common humming-bird. In the forests of the Pacific Coast it is an abundant and familiar bird, and its gentle though active nature endears it to all observers of bird life. It is said that at times it is so intent in its search for insect food that it is perfectly oblivious to its surroundings and may be easily taken alive. By imitating its call-notes a number of bush-tits may always be attracted to the vicinity of the intruder.

The nest of the bush-tit is an elaborate affair about eight inches long and three inches in diameter, and in form quite

like a long purse. It is suspended from the branches of any tree that suits the fancy of the birds, and is seldom more than five or six feet above the ground. The structure is a woven mass of twigs, moss, bark fibers, leaves, and lichens. The entrance is near the top and sheltered by a cover or roof of woven moss and lichens, and also by the foliage of the twigs from which it is suspended. The opening is further strengthened by a strongly woven ring.

VERDIN

The Verdin, or Yellow-headed Bush-tit, is one of the smallest American birds. His general appearance and habits remind one of our kinglets. The verdin, however, inhabits the southwestern portions of the United States from western Texas across the arid regions of New Mexico and Arizona through Lower California. This tiny creature with his bright yellow head measures smaller than our largest American humming-bird. "This bird is no more than a bush-tit in his Sunday clothes, not a full suit, but a bright yellow head and neck dress." (Reed.)

Like our magpie and wrens, he constructs an immense nest. Thorny twigs and stems are cleverly interwoven into a nest resembling in size and shape an ordinary cocoanut. A little entrance is made at the side and into this the birds carry flower stems and feathers. Low branches in brier-like trees and shrubs are favorite nesting sites. Sometimes the birds nest among the cacti. The nests are securely fastened in a small cluster of twigs or thorns. The eggs are light blue daintily covered with minute specks of pale brown.

VERDIN.
(Auriparus flaviceps)
½ Life-size.

GOLDEN-CROWNED KINGLET

Aside from the ruby-throated humming-bird, the kinglets are the smallest of eastern North American birds. They are hardy little creatures, many of them wintering in southern Illinois and adjacent states. Their summer home is chiefly in the northern portions of the Northern States from Maine west to and including Minnesota, northward. In Montana, Oregon, and Washington the western Golden-crowned Kinglet occurs. Kinglets winter generally throughout the United States, except in the northern tier of states. The habits of the two species are practically the same.

These useful birds while migrating frequent highways, dooryards, and public parks in great numbers. They move about apparently unconscious of man, feeding among the lower branches and occasionally darting into the air for an insect. In feeding in patches of burdock many golden-crowned kinglets become fatally entangled in the burs. Sometimes an entire flock of six or eight meet death in the space of a few rods.

The summer home of the kinglets is infested with countless millions of insects. So abundant are these various forms of minute insect life that mosquito-proof clothing must be used. Even fur-bearing animals are unable to endure the pests, which are at their worst in May, gradually diminishing as the surface water evaporates. Upon their arrival in the northern United States the kinglets immediately resort to the coniferous groves. The males sing from the densest balsams and hemlocks, where one would expect nothing

smaller than a robin to utter such an outburst of melody.

The nests are beautiful structures built of moss, lichens, and sometimes plant down. The lining consists of hair and feathers. The nests are securely fastened to the small stems on the drooping boughs of an evergreen. Owing to the dense woods in which these birds nest and the rapidity with which they move through the coniferous trees, the nests are rarely discovered except by watching the birds carry nesting material.

RUBY-CROWNED KINGLET

The Ruby-crowned Kinglets travel northward through the central United States from the Atlantic to the Pacific. They nest in cold climates, usually in Canada, though frequently the mountains of Colorado and the Pacific Coast, with their growths of fir and hemlock, offer inviting sites. They winter south of the southern limit of breeding range.

The ruby-crowned may be distinguished from the golden-crowned by the crimson patch of feathers extending back from the base of the bill on the male birds, while the golden-crowned has orange or yellow on the top of the head. These little fellows are less common than the golden-crowned and migrate singly or in groups of two or three. They do not seem to be attracted to the seeds of the burdock, and so escape the cruel fate of the golden-crowned, which often becomes fatally entangled in the burs of the dock

The song of the ruby-crowned is sweet and remarkable in volume for so small a bird. People of the Central States are rarely favored with the song of the golden-crowned, but the ruby-crowned sings during the spring migration. His

RUBY-CROWNED KINGLET
Abert Lorentz

melodious little ditty is apparently poured forth simply because he is happy, and not for the benefit of his sober mate, for she is not in evidence.

The nests are beautiful little globular affairs constructed of moss and lined with the feathers of wild birds. They are securely fastened among the smaller branches, usually of a coniferous tree, and the nest is sometimes found with the entrance at the top, but generally the entire structure is fastened to the twigs beneath the main branch and near the extremity of the limb.

The nests are difficult to locate unless one is fortunate in contending with the millions of mosquitoes and other insect pests which inhabit the timbered lakes in April and May, when nest building is in progress. A quantity of pennyroyal rubbed on the hands and face will serve partially to protect the naturalist from these tormenting insects. Nothing is more to the liking of the kinglet than these minute gnats. They also devour other insects and their eggs and larvæ.

I have six tiny eggs of the ruby-crowned kinglet, sent me from Colorado.

BLUE-GRAY GNATCATCHER

This dainty little bird frequents the upper branches of trees where its presence is not often suspected. The note is weak and suggests the distant call of a catbird. These little birds inhabit the United States, particularly south of latitude 42 degrees. Georgia, Tennessee, the Carolinas, and Ohio are favorite states for this little gnatcatcher during

the summer months. A few nest as far north and west as upper Illinois and Indiana. In southern and eastern Michigan it is found in suitable localities where second-growth oak, elm, and hickory are found. The white outer tail feathers and small size are unmistakable field marks.

These interesting little birds seem to have a spirit of adventure in pursuit of food. They have been seen entering a long, small water pipe used as a hitching-rack for horses, and would traverse the entire distance, emerging from the other end.

The nest of the blue-gray gnatcatcher is one of the marvels in bird architecture. Externally covered with lichens held in place by cobwebs, it is securely saddled on a horizontal limb eighteen to forty feet above the ground. On the inside the nest is warmly lined with plant down, and from below one can scarcely distinguish the nest from a knot on the limb. It looks much like the nest of a humming-bird.

The four or five greenish eggs are daintily speckled with dark brown. In Ohio and southern Michigan nest building commences about May 15th, and the eggs are deposited late in May or early in June. The period of incubation is about ten days.

BLUE-GRAY GNATCATCHER
(Polioptila cærulea)

CHAPTER XXI

THRUSHES

THRUSHES are unquestionably the sweetest-voiced birds in America, though inferior to some other songsters in execution. These birds are all migratory, returning regularly to a given locality in April or May to breed. They live upon worms, winged insects, berries, and fruit. They are not sociable while nesting, but migrate in flocks, and are usually gregarious also in winter. Their bodies are cylindrical. The plumage on the upper parts is usually a uniform color of blue, brown, or gray.

"On the basis of certain details of structure thrushes are generally assigned highest rank in the class of Aves. Without pausing to discuss the value of the characters on which this classification is made, there can be no question that from an æsthetic standpoint the thrushes possess in a greater degree than any other birds those qualifications which make the ideal bird. There are many birds with brighter plumage, more striking voices, and more interesting habits, but there are none whose bearing is more distinguished, whose songs are more spiritual. The brilliant humming-birds and tanagers excite our admiration, but the gentle, retiring thrushes appeal to our higher emotions; their music gives voice to our noblest inspirations.

"Five of the true thrushes of the genus Turdus are found in eastern North America. Three of them may be

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mentioned here — the veery, wood thrush, and hermit thrush — a peerless trio of songsters. The veery's mysterious voice vibrates through the air in pulsating circles of song, like the strains of an Æolian harp. The wood thrush's notes are ringing and bell-like; he sounds the matin and vesper chimes of day, while the hermit's hymn echoes through the woods like the swelling tones of an organ in some vast cathedral." (Chapman.)

WOOD THRUSH

The Wood Thrush, or Song Thrush, is quite a local bird, being partial to certain localities. It occurs at frequent intervals from the Atlantic to the Mississippi, breeding from the Ohio River into southern Canada and wintering in Central America.

The head, back, tail, and upper wing feathers are rich olive brown. The breast and lower abdomen is whitish, distinctly spotted with black, giving the bird a handsome polka-dot effect, the most striking field mark. Commonest of our thrushes, except the robin and bluebird, in size he ranks next to the robin, but is less boisterous and not so familiar. Like the olive-backed and hermit thrushes, the wood thrush is retiring and solitary in his habits.

In the estimation of many bird-lovers, it ranks first as a songster. The clear, liquid, metallic notes may be heard after sunset, coming from the dense portions of our wooded districts or from shaded lawns of villages. A mile from the author, separated by an expanse of water, I have often enjoyed the clear, bell-like notes which here vibrate more exquisitely than elsewhere.

WOOD THRUSH.
Life size.

WILSON'S THRUSH.
¾ Life-size.

They feed usually on the ground, where the rich soil offers little resistance to their short, slender bills. Insects, berries, wild fruits, and soft vegetables, such as an overripe tomato, will often prove tempting morsels. Low, damp woods, heavily timbered roadsides, and underbrush along streams are chosen haunts. The haunts seem to be changing from dense woods to towns and about farmhouses as the primeval forest disappears and the trees grow up about residences.

The nests are placed from four to thirty feet above ground, usually in a dense shrub or vine, often about houses. In construction they are similar to the robin's nest. Roots, stems, and grass enter into the composition, and these are held in place and cemented to the branches with a moderate amount of mud. The inside of the nest is lined with grass and root. Three or four deep blue eggs, usually darker than a robin's, are laid. When sitting the mother bird is very tame and does not offer much aggressiveness.

VEERY OR WILSON THRUSH

The Veery, formerly called Wilson's Thrush, is a common bird in eastern North America west to Illinois and Wisconsin, where its near relative, the willow thrush, occurs. The veery winters in Central America. Wilson's thrush is a smaller and lighter form of the true willow thrush, but the habits, song, and disposition are identical. This bird loves the deep shady groves where fallen logs occur. Like most other thrushes, the veery and the willow thrush are celebrated songsters, though, owing to their modest ways,

they are more often heard than seen. "The veery has a double personality, or he may repeat the notes of some less vocally developed ancestor, for on occasion he gives utterance to an entirely uncharacteristic series of cackling notes, and even mounts high in the tree to sing a hesitating medley of the same unmusical 'cacks,' broken whistled calls, and attempted trills. Fortunately, this performance is comparatively uncommon, and to most of us the veery is known only by his own strange, unearthly song. His notes touch chords which no other bird's song reaches. The water thrush is inspiring, the wood and hermit thrushes 'serenely exalt the spirit,' but the veery appeals to even higher feelings; all the wondrous mysteries of the woods find a voice in his song; he thrills us with emotions we cannot express." (Chapman.)

Late in June, 1911, I had the pleasure of finding several pairs of willow thrushes occupying a little stretch of woodland in northern Illinois. My attention was first attracted by an extremely sweet note, full and low, but decidedly softer than the song of the wood thrush. My search revealed two nests, one on the ground at the base of a bush and the other a beautiful nest of bark strips, stems, and moss placed on a fallen bough three feet from the ground and concealed by overhanging ferns and vines. The nests are usually to be found among the leaves on the ground in tangled masses of briars, and quite frequently situated on small hummocks. The latter nest contained four deep blue eggs. This is probably the most southern record for the willow thrush. Minnesota and the provinces of Canada is the summer home of this retiring bird.

GRAY CHEEKED THRUSH
(Hylocichla Aliciae)

THE ALICE'S THRUSH*

Alice's Thrush, or the Gray-cheeked Thrush, has an extensive range covering the whole of North America from the Atlantic Coast westward to the plains and northward to the regions beyond the Arctic Circle, and is abundant along the Arctic Coast. From its breeding-grounds in northern North America, on the approach of winter, it migrates southward to Central America.

Alice's thrush is a shy bird during the nesting period and remains within the friendly shelter of thickets, and, though unseen, "their lowest sweet song is frequently heard." Mr. Ridgway says: "The notes are said to be quite distinctive, the song being most like that of the hermit thrush, 'but differs in being its exact inverse,' beginning with its highest and concluding with its lowest notes, instead of the reverse."

Its nests are usually placed in shrubs or low branching trees at a height of but two to seven feet from the ground, and in a few instances it has been known to nest on the ground. The nest is usually compact and "composed of an elaborate interweaving of fine sedges, leaves, stems, dry grasses, strips of fine bark, and lined with fine grass. Occasionally nests are constructed with mud, like those of the common robin." It is said that this thrush will easily modify its nesting habits to suit the requirements of its environment. In the land of the deer, nests have been found that were wholly constructed of hair and lined with the hair of deer, feathers, and some moss.

In our illustration is shown its habit of scratching away the dead leaves that accumulate under the trees, in its search for grubs and worms.

OLIVE-BACKED THRUSH

From the northern United States northward the Olive-backed, or Swainson's, Thrush is common during the summer months in some localities. Nova Scotia and New Brunswick are favorite retreats of this forest-loving bird. In most of the United States east of the Rocky Mountains these birds are with us only as transients. They appear in April on their way north, and again for a week or two in October on their way to the northern part of South America, where most of them spend the winter.

Like the robin, this bird loves to glean its food from rich soil. During the migrations it frequents the dooryards, and, unfortunately, ventures too near the haunts of lurking felines. The song is soft yet penetrating. Late in the afternoon or early evening, when all about the woodland marshes is tranquil, I have listened to the vibrating notes of the olive-backed. The effect of its loud and beautiful song is enhanced by the evening hush. "It lacks the leisurely sweetness of the hermit thrush's outpourings, nor is there pause, but in lower key and with greater energy it bubbles on rapidly to a close rather than fading out with the soft melody of its renowned rival. There are also a variety of other notes." (J. Dwight, Jr.)

The nests are placed in both coniferous and deciduous trees, usually not more than six or eight feet high. I found

OLIVE-BACKED THRUSH.
(Turdus Swainsonii Swainsonii)
Nearly Life-size.

HERMIT THRUSH

several in the vicinity of Butternut Lake, Wisconsin. In general structure the nests were very similar to the robin's, but smaller, to correspond with size of the bird. The three or four eggs are deep blue, beautifully dotted with deep brown and chestnut. Nest building begins early in June and before the month is over most of the young have hatched.

HERMIT THRUSH

The Hermit Thrush ranges through eastern North America, breeding from northern Michigan and Massachusetts northward and southward along the Alleghanies to Pennsylvania, and wintering from southern Illinois and New Jersey to the Gulf States.

"In the Canadian fauna the hermit thrush, the most definite thrush to study, comes a month before the olive-backed thrush arrives, while the snow wraiths still linger in the shadowy forests. In the fall it tarries as long after the olive-backed has departed.

"When the hermit thrush appears in the spring its song is wonderfully sweet, but it does not come into full possession of its voice until some time after its arrival. It is usually conceded to be our most beautiful singer. In early August it is still in full song, but by the middle of the month the song is thin, suggesting the imperfect attempts of a young bird. Later than that it seldom sings.

"It is to be regretted that so many of the young fail to mature. A record kept for five years, containing the history of fourteen nests and forty-seven eggs, shows that only nineteen fledglings left the nest. I wish to emphasize the

fact that these very beautiful, insectivorous birds lead a most precarious existence, having to contend not only with wild foes but with domestic cats.

"In two or three cases, I have found the hermit thrush very timid. Generally, the bird flies from the nest as a person approaches, or runs away over the leaves with head and tail drawn down so as to appear less conspicuous, mounts a branch at a safe distance, slowly raises and lowers its tail, then glides from sight. One or two have been so tame that I have had to put my hand out as if to touch them, in order to drive them from the nest."

"Sometimes it sings during the winter in Florida, and also while migrating; but if you would hear this inspired songster at his best you must visit him in his summer home. The hermit thrush's song resembles that of the wood thrush in form, but it is more tender and serene. 'O spheral, spheral! O holy, holy!' Mr. Burroughs writes as its opening notes, and there is something about the words which seem to express the spirit of heavenly peace with which the bird's song is imbued." (Chapman.) The nest of moss, coarse grass, and leaves, lined with pine needles and rootlets, is placed on the ground, generally under a low fir tree. Three or four greenish-blue eggs are laid.

ROBIN

The range of the Robin is eastern North America to the Rocky Mountains, breeding from the northern part of the Gulf States to the Arctic Ocean, and wintering from Illinois and New Jersey southward. From the Rocky

ROBIN.
Life-size.

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Mountains westward a paler plumaged bird, called the Western robin, is found, with habits similar to those of the robin east of the Great Plains.

Robins join us north of the Ohio early in March, immediately announcing their presence by warbling gently, perhaps in the immediate vicinity of their last year's nest. The migrating robins which go north of us to spend the summer are not so partial to habited sections until they reach their destination, and are more apt to be found in small flocks in wooded pastures, parks, or underbrush.

The robin feeds largely upon earth worms, grubs, berries, and is particularly fond of cherries. So persistent are they in raiding the fruit trees during cherry time that some farmers forget the birds' many virtues and destroy them. They are found in large flocks in the South, where the pot hunters bag them.

A friend gives the following account of the robin's industry, and the sparrow's adaptation of means to ends: "I observed a robin with about twenty sparrows following. He soon dragged forth a worm, when a sparrow snatched it from his beak and flew off to its nest. With an air of indignation, the robin put the remaining sparrows to flight, when he continued his hunt. Instantly, the sparrows returned, and, when a second worm rewarded the robin's industry, another sparrow seized it and made off. The robin seemed as much surprised and hurt as before. This was continued, until I saw perhaps thirty or forty worms thus taken. I know not how many were taken before I arrived or after I left. The sparrows evidently had nestlings and were taking the worms for them."

Robins frequently create needless commotion among the birds, yet we cannot help but admire them. The way they run rapidly over our lawns, digging earth worms almost beneath the spraying hose, demonstrates their fondness for the habitations of man, although, like the wood thrush, a few still retire to the uncultivated land to nest.

Unless the nest is in a conspicuous place, where people frequently pass, the female becomes greatly disturbed at the approach of an intruder, and chirps angrily, calling to her mate to join her in the attack. Many a sitting robin would remain unnoticed if it were not that her suspicious nature invites attack. Unfortunately, the family cat too often causes tragedies in the robin's home. It is well to kill the cat or protect the nest from her ravages.

A careful observer relates that a pair of robins nested for five years in an old apple tree in their yard. On the sixth year, when they returned to the old nesting site, they appeared disconsolate for some days. They then went over to an old pear tree and began their nesting and were again happy. When the leaves came forth, the apple tree was found to have been winter-killed. The birds had wished the protection of a tree with foliage.

We are apt to find the robin's nest on a fence post, in one of the orchard trees, in a shade tree, or in some nook or corner of the house or barn. The nests are composed of roots and grass, strongly cemented with a quantity of mud. The lining is usually entirely of soft, dry grass. The robin's egg is easily described by the term, "robin's-egg blue," which shade is given to the three or four elliptical eggs laid in April or May. A second brood is hatched

VARIED THRUSH.
(Hesperocichla naevia.)
About ⅓ Life-size

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WHEATEAR.
(Saxicola oenanthe).
Life-size.

from forty-five to sixty days later, the male in the meantime taking charge of the first brood after they leave the nest.

VARIED THRUSH

The Varied Thrush is a handsome bird, inhabiting the Pacific Coast region of the United States, breeding from California northward into the wilds of Alaska, but principally in British possessions. In spite of its supposed Western range, three or four specimens have been recorded along the Atlantic Coast in New Jersey, New York, and Massachusetts.

The varied thrush feeds chiefly upon the ground, obtaining insects and bugs by scratching away the leaves and exposing the earth in damp situations. They also are fond of wild berries and fruit.

The mating song in early spring and later in Canada is beautiful, reminding one of the robin. It is sometimes, though incorrectly, called Western robin.

The nests are placed in ordinary localities, usually a few feet above the ground in a shrub. Dry grass, moss, and lichens, intermingled with dry stem rootlets are used in constructing the nest. The eggs are pale grayish-blue, sparingly marked with brown specks.

WHEATEAR

The range of the Wheatear, or Stone-chat, is nearly cosmopolitan, occurring in Europe, North Africa, Asia, and Greenland. The accidental visitors to this continent

have been observed in Labrador, Nova Scotia, and other points along the Atlantic Coast. In the British Isles he is one of the commonest birds.

Mr. Saunders writes: "From early spring onward, the wheatear is to be seen jerking its white tail as it flits along, uttering its sharp 'chack-chack,' on open marshes, moors, and uncultivated places." Some ascend the mountains almost to the highest altitudes. The song of the male is rather pretty, and the bird also displays considerable powers in imitating other species.

The nests are usually well hidden among the crevices of rocks and boulders, sometimes in an old well, a quarry, a gravel pit, in excavations made by sand martins, or even in deserted rabbit burrows. The nest is merely an accumulation of grass, moss, hair, and other soft material, in which four to six pale blue eggs are laid in May and June.

BLUEBIRD

The common and familiar Bluebird is an inhabitant of all the States east of the Rocky Mountains, from the Gulf northward into Canada. It winters as far north as southern Illinois in the Mississippi Valley and Pennsylvania in the east, thence south to the Gulf. In the spring it is one of the first migrants to arrive in the Northern States, and is always welcomed as an indication of the final breaking up of winter.

The upper parts of the plumage in both sexes are blue, darker in the male, but the shades vary greatly in both sexes. The breast of the male is a rich chestnut brown;

BLUE BIRD.
Life-size.

that of his mate is several shades paler. In America we have no other member of the family, save the Western form of the bluebird, where brown is not the predominating color among the thrushes.

The notes of the bluebird are as sweet as they are simple. There is something in the character of the notes that reminds one of the wood pewee's song, if such the latter may be called. Their sweet carols convey the idea that the birds take life seriously. As the bluebirds are passing overhead late in October, their sad notes bring a realization that the days of blossoms and verdure are past, and bleak, wintry weather is in store.

At no season of the year does this species appear overdemonstrative. The actions at all times are modest and reserved, seeming to show the result of good breeding. He has neither the cunning of the jay, the aggressiveness of the kingbird, nor the cherry-stealing habit of his near relative, the robin.

The bluebird's arrival is simultaneous with that of the meadowlark and robin, a trio that inspires the feeling that spring has really returned. The most sentiment is associated with the return of the bluebird, because the mellow warble is uttered about our dooryard, perhaps on a nearby wire.

"The bluebird has not been accused of stealing fruit or of preying upon crops. An examination of 300 stomachs showed that 76 per cent of the food consists of insects and their allies, while the other 24 per cent is made up of various vegetable substances, found mostly in stomachs taken in winter. Beetles constitute 28 per cent of the whole food,

grasshoppers 22, caterpillars 11, and various insects, including quite a number of spiders, comprise the remainder of the animal diet. All these are more or less harmful, except a few predaceous beetles, which amount to 8 per cent. In view of the large consumption of grasshoppers and caterpillars, we can condone this small offense. The destruction of grasshoppers is noticeable in August and September, when these insects form more than 60 per cent of the diet.

"It is evident that in the selection of its food the bluebird is governed more by abundance than by choice. Predaceous beetles are eaten in spring, as they are among the first insects to appear, but in early summer caterpillars form an important part of the diet, and are replaced a little later by grasshoppers. Beetles are eaten at all times except when grasshoppers are more easily obtained. So far as its vegetable food is concerned, the bluebird is positively harmless."

They take readily to artificial nesting sites, and appreciate bird boxes and cotes that are erected for that purpose. Every dooryard should be adorned by such a bird house. They return annually to build their nests in the hole in the old apple tree. Dry grass is the principal composition used in constructing the abode. Four or five light blue or sometimes pure white eggs are laid in April or early May. Frequently a second brood is raised in July.

"Brave little fellow! the skies may be dreary,
Nothing cares he while his heart is so cheery.
Hark! how the music leaps out from his throat,
Hark! was there ever so merry a note?"

MOUNTAIN BLUE BIRD.
½ Life-size.

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MOUNTAIN BLUEBIRD

This handsome bird of the Thrush family is more delicately colored than our Eastern bluebird. It may be found in the territory from Colorado to the Pacific, ranging northward through the mountains to the Hudson Bay country. In some localities it is known as the Rocky Mountain, or Arctic, Bluebird. The habits are similar to those of the bluebird.

The birds feed upon insects, worms, wild fruit, and seeds. They are able to adapt themselves to climatic conditions and weather some of the severest storms.

In certain portions of our Western States the birds show a preference for the habitation of man, and build their nests in nooks and crevices about barns and sheds. Frequently the deserted excavations constructed by various woodpeckers are used as nesting sites. Dry grass is the chief and often only article used in constructing the nest. Four or five pale blue eggs are laid. Like our Eastern bluebird, the young, when able to fly, are escorted by the male, while the female prepares the nest for another setting.

CHAPTER XXII

FAMOUS FOREIGN AND INTRODUCED BIRDS

THESE birds are famous for various reasons. Most of them are noted for striking characteristics which will be brought out in the special article descriptive of each.

The lyre bird and motmot are noted for their remarkable tails. The parrot is famous for its bright colors, its peculiarities of claws and beak, and for its ability to speak. The robin redbreast, the skylark, and nightingale have become household words and universal favorites in Europe.

The pheasant family includes nearly one hundred species, all of which, with the exception of the Yucatan turkey and the wild turkeys of the United States, are natives of the Old World, where more species are found in southern Asia than elsewhere. To this family belong the peacock and the interesting jungle fowls from which our domestic chickens have been developed. Many of the pheasants are remarkably beautiful birds. Some of these foreign species have been successfully introduced into the Pacific States and in British Columbia.

THE MANDARIN DUCK*

"A more magnificently clothed bird," says Wood, "than the male Chinese Mandarin Duck can hardly be found, when in health and full nuptial plumage. They are natives

of China and Japan, and are held in such high esteem by the Chinese that they can hardly be obtained at any price, the natives having a singular dislike to seeing the birds pass into the possession of Europeans."

Though web-footed, the birds have the power of perching, and it is a curious sight to watch them on the branches of trees overhanging the pond in which they live, the male and female being always close together, the one gorgeous in purple, green, white, and chestnut, and the other soberly appareled in brown and gray. This handsome plumage the male loses during four months of the year, from May to August, when he throws off his fine crest, his wing-fans, and all his brilliant colors, assuming the sober-tinted dress of his mate. The summer duck of America bears a close resemblance to the mandarin duck, both in plumage and manners, and at certain times of the year is hardly to be distinguished from that bird.

"The Chinese," says Dr. Bennett, "highly esteem the mandarin duck, which exhibits, as they think, a most striking example of conjugal attachment and fidelity. A pair of them are frequently placed in a gaily decorated cage and carried in their marriage processions, to be presented to the bride and groom as worthy objects of emulation."

"I could more easily," wrote a friend of Dr. Bennett's in China, to whom he had expressed his desire for a pair of these birds, "send you two live mandarins than a pair of mandarin ducks." This foreign duck has been successfully reared in zoölogical gardens, some being hatched under the parent bird and others being quite successfully hatched under the domestic hen.

MANDARIN DUCK
[Aix galericulata]
Life size

BLACK SWAN.
(Cygnus atratus).

THE BLACK SWAN*

Australia is the home of the Black Swan, and it is invested by an even greater interest than attaches to the South American bird, which is white. The Dutch navigator William de Vlaming, visiting the west coast of Southland, sent two of his boats on the 6th of January, 1697, to explore an estuary he had found. There their crews saw at first two and then more black swans, of which they caught four, taking two of them alive to Batavia; and Valentyn, who several years later recounted this voyage, gives in his work a plate representing the ship, boats, and birds, at the mouth of what is known from this circumstance as the Swan River, the most important stream of the thriving colony of West Australia, which has adopted this swan as its armorial symbol. Subsequent voyagers, Cook and others, found that the range of the species extended over the greater part of Australia, in many districts of which it was abundant. It has since rapidly decreased in number there, and will most likely soon cease to exist as a wild bird, but its singular and ornamental appearance will probably preserve it as a modified captive in most civilized countries, and it is said perhaps even now there are more black swans in a reclaimed condition in other lands than are at large in their mother country.

The erect and graceful carriage of the swan always excites the admiration of the beholder, but the gentle bird has other qualities not commonly known, one of which is great power of wing.

When left to itself, the nest of the swan is a large mass of aquatic plants, often piled to the height of a couple of feet, and about six feet in diameter. In the midst of this is a hollow which contains the eggs, generally from five to ten in number. They sit upon the eggs between five and six weeks.

THE WHITE SWAN*

This magnificent bird is well known from being kept in a half-domesticated condition throughout many parts of Europe, whence it has been carried to other countries. In England, according to Newton, it was more abundant formerly than at present, the young being highly esteemed for the table.

The swan was introduced into England in the reign of Richard Cœur de Lion; but it is now so perfectly naturalized that birds having the full power of flight remain in the country. There is no evidence to show that its numbers are ever increased by immigration from abroad, though it is known to breed as a wild bird in the extreme south of Sweden, whence it may be traced in a southeasterly direction to the valley of the Danube.

The nest of the swan is a large mass of aquatic plants, is often two feet high and six feet in diameter. The eggs are from five to nine in number, of a grayish-olive color. The young are hatched in five to six weeks, and when hatched are clothed in sooty-gray down, which is succeeded by feathers of dark soot-gray. This suit is gradually replaced by white; but the cygnets are more than a year old before they lose all trace of color and become white.

GREEN WOODPECKER (Europe),
(Picus viridis).

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The swan of North America is considerably larger than that of the Old World. The first species is the trumpeter, so called, of which the bill is wholly black, and the second (*Cygnus columbianus,* or *americanus*) has the colored patches on the bill of less extent and deepening almost into scarlet.

THE GREEN WOODPECKER*

Not unlike its relatives in our own country, the beautiful Green Woodpecker of foreign lands finds in a tree "a castle, a pasture, a larder, a nursery, an alarm-drum, and a lute." It frequents the ancient forests of Europe, Asia, where it is even found to some extent in the intemperate climate of Siberia, and in northern Africa. As it is a bird of wide distribution, found in many countries and known to all classes of people, it has been given many common names. Space forbids an enumeration of all of these names, but a few of the more common ones may be mentioned. Some of them, such as Hew-hole, Pick-a-tree, Awl-bird, and Nickapecker, are eminently suggestive of the bird's habits, and the names High Hoe Popinjay, Yoppingall, and Whittle are not without meaning.

The green woodpecker is quite frequently called the Rain-bird, or Rain-fowl, for it is very active and quite noisy as the "drought begins to soften," a short time before a shower. At this time its harsh note, which has been described as sounding like "glu, glu, glu, gluck," is much more in evidence.

The green woodpecker not only feeds upon the grubs that bore in the wood of trees, but also from the various

insects that it finds upon the surface. It will also feed upon the eggs of insects, and ants are dainty morsels of food, and of these it destroys a large number, seeking them upon the ground as well as on the trees.

The green woodpecker nests either in a natural hole in a tree or in one that it has excavated.

The woodpeckers are among our most useful birds. Though they do not feed to any extent upon the insect pests of the meadow, the grain field, and the garden, they do destroy a large number of the borers and other insects that are injurious to trees. "The aged tree is all to the woodpecker, and the woodpecker is much to the aged tree."

THE EUROPEAN KINGFISHER*

Rarely indeed is this charming bird now found in England, where formerly it could be seen darting hither and thither in most frequented places. Of late years, according to Dixon, he has been persecuted so greatly, partly by the collector, who never fails to secure the brilliant creature for his cabinet at every opportunity, and partly by those who have an inherent love for destroying every living object around them. Gamekeepers, too, are up in arms against him, because of his inordinate love of preying on the finny tribe.

The Kingfisher is comparatively a silent bird, though he sometimes utters a few harsh notes as he flies swift as a meteor through the wooded glades. Sometimes he will alight on stumps and branches projecting from the water, and sit quiet and motionless, but on your approach he darts

EUROPEAN KINGFISHER.
(Alcedo ispida.)

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LYRE BIRD

quickly away, often uttering a feeble "seep, seep" as he goes.

The nest is said to be made of the fish bones ejected by the bird, while the real facts are that they not only nest, but roost, in holes, and it must follow that vast quantities of rejected fish bones accumulate, and on these the eggs are of necessity laid.

These eggs are very beautiful objects, being of a deep pinkish hue, usually six in number.

The food of the kingfisher is not composed entirely of fish, the remains of fresh-water shrimps being found in their stomachs, and doubtless other animals inhabiting the waters are from time to time devoured.

The English kingfisher, says Dixon, remains throughout the year, but numbers perish when the native streams are frozen.

THE LYRE-BIRD

If Australia were noted for no other thing than the ancient and strange animal forms which are to be found nowhere else on the earth, it would still be a wonderful continent. Not the least remarkable of these forms is the Lyre-bird.

The tail is the bird's crowning glory, at once giving it a name and fame. Like many other cumbersome things, the lyre-bird's tail is used for ornament during a part of the year only, being donned at the mating season and doffed at the close of the nesting period.

Authorities agree that the lyre-bird's powers of song are remarkable. It seems to have the power of mocking

almost every other bird, as well as the barking of the dingo, besides possessing a sweet song of its own. One author states that for the first two hours of the morning it repeats over again its own song, then gradually changes it to imitate other birds, ending its four-hour song period with imitations of all the other birds within hearing, then remaining silent for the rest of the day.

The nest is a dome-shaped affair with the opening in one side, made of "small sticks, interwoven with moss and fibers of roots." "The single egg laid is of a very dark color, appearing as if it had been blotched over with ink." The young emerges from the egg a downy white ball, perfectly helpless, and remains in the nest for several weeks. The food seems to consist of insects, myriapods, and snails, of which large quantities must be destroyed to satisfy a bird of this size. LYNDS JONES.

THE RED BIRD OF PARADISE*

Birds of Paradise are found only in New Guinea and on the neighboring islands. The species presented here is found only on a few islands.

In former days very singular ideas prevailed concerning these birds, and the most extravagant tales were told of the life they led in their native lands. The natives of New Guinea, in preparing their skins for exportation, had removed all traces of legs, so that it was popularly supposed they possessed none, and on account of their want of feet and their great beauty, they were called birds of paradise, retaining, it was thought, the forms they had borne in

RED BIRD OF PARADISE.
(Paradisea raggiana)

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YELLOW-THROATED TOUCAN.
½ Life-size

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the Garden of Eden, living upon dew or ether, through which it was imagined they perpetually floated by the aid of their long, cloud-like plumage.

The sounds uttered by this bird are very peculiar, resembling somewhat the cawing of the raven, but change gradually to a varied scale in musical gradations, like "he, hi, ho, how!" He frequently raises his voice, sending forth notes of such power as to be heard at a long distance. These notes are "whack, whack," uttered in a barking tone, the last being a low note in conclusion.

While creeping amongst the branches in search of insects, he utters a soft clucking note. During the entire day he flies incessantly from one tree to another, perching but a few moments, and concealing himself among the foliage at the least suspicion of danger.

"To watch this bird make its toilet is one of the most interesting sights of nature; the vanity which inspires every movement, the rapturous delight with which it views its enchanting self, its arch look when demanding the spectator's admiration, are all pardonable in a delicate creature, so richly embellished, so neat and cleanly, so fastidious in its taste, so scrupulously exact in its observances, and so winning in all its ways."

YELLOW-THROATED TOUCAN

The Yellow-throated Toucan, a large-billed bird found in tropical America, bears some resemblance to the hornbill of Asia and Africa. The most striking feature of this handsome bird is the monstrous bill, and the bird's chief

mission seems to be to care for it, as it frees its beak from every stain and carefully tucks it away among its feathers or rests it on its back while sleeping. The bill seems entirely out of proportion to the size of the bird, but it is of a light, honeycombed structure, and is not so heavy as it appears. It has been suggested that the bill masticates the food, since the bird has no gizzard. The awkward, hopping gait is in striking contrast to the easy, graceful flight. It feeds on fruits principally, but eggs, fish, and even small birds may enter into the diet. While feeding, a sentinel is stationed to give the cry, "Toucano," from which the name is derived. Toucans live in flocks in forests, nesting in hollow trees. These birds are killed not only because of their beautiful plumage but also as food.

THE CASSOWARIES*

"Two important features serve at once to distinguish the Cassowaries and their near allies, the emeus, from the ostriches and the rheas, the first of these being that the feathers have airshafts of such large size as to make them practically double, while the second peculiarity is to be found in the eggs, which, instead of being light-colored and smooth, are dark green in color and granulated in texture."

Like the ostrich, the cassowaries belong to a group of flightless birds, their wings being so rudimentary as to be practically invisible externally. The visible portion of the wings consists of about five black quills, which have no barbs, and resemble coarse bristles. Their heads are devoid of feathers and on the crown there is a prominence which

CASSOWARY
(Casuarius galeatus)
½ Life-size

is simply an extension of the bones of the skull. The feathers of the body have a loose and coarse appearance and are dark-colored and glossy. The feathers do not appear at all like those of the plumage of flying birds, and seem more like hairs. The cassowaries possess three toes on each foot, the inner ones having a very long claw.

There are about nine species of the cassowaries, all being classed by ornithologists in the genus *Casuarius*. Of these, probably the most familiar is the helmeted species of our illustration (*Casuarius galeatus*), which is a native of the island of Ceram. The other species inhabit either Australia, New Guinea, or some of the neighboring islands. The Australian species is the largest of them all, and when it stands erect is more than five feet in height. The skin of the head and the upper part of the neck of the helmeted cassowary is of a dull blue or purple color, with a reddish tint. The wattles are pendant and similar to those of the turkey.

The cassowaries inhabit thick forests, and are so shy and wary that they are seldom seen in their native haunts. They are easily tamed, and in captivity they are very docile. It is said, however, that in a wild state they do not hesitate to defend themselves, and kick with great force and effect. Their food is without doubt of a vegetable nature, though some authorities claim that they also feed upon the eggs of other birds. They are inclined to feed in flocks. Observers say that the Australian species, which seems to inhabit only the rocky, wooded districts, is usually seen in flocks of eight or ten individuals. One species, taken young, may be reared by hand.

SOUTH AMERICAN RHEA OR OSTRICH*

South American Rhea is the name by which this immense bird is known to science. It is a native of South America, and is especially numerous along the River Plata. Usually seen in pairs, it sometimes associates in flocks of twenty or thirty, and even more have been seen together. Like all the members of the family, it is a swift-footed and wary bird, but possesses so little presence of mind that it becomes confused when threatened with danger, runs aimlessly first in one direction and then in another.

For our knowledge of the rhea and its habits we are chiefly indebted to Mr. Darwin, and we shall use his language in this account of the bird. The birds generally prefer running against the wind, yet, at the instant, they expand their wings and, like a vessel, make all sail.

Natives easily distinguish, even at a distance, the male from the female. The former is larger and darker colored, and has a larger head. It emits a singular, deep-toned hissing note. Darwin, when he first heard it, thought it was made by some wild beast. It is such a sound that one cannot tell whence it comes, nor from how far distant.

"When we were at Bahia Blanca, in the months of September and October, the eggs of the rhea were found in extraordinary numbers all over the country. They either lie scattered singly, in which case they are never hatched, or they are collected together into a hollow excavation which forms the nest. Out of the four nests which I saw, three contained twenty-two eggs each, and the fourth twenty-

SOUTH AMERICAN RHEA.

Rhea americana.

IMPEYAN PHEASANT
(Lophophorus impeyanus)
♂ ♀ Life-size

seven. The Gauchos unanimously affirm, and there is no reason to doubt their statement, that the male bird alone hatches the eggs, and that he for some time afterward accompanies the young."

THE IMPEYAN PHEASANT*

This beautiful bird, which is noted for the wonderful color and metallic iridescence of the male's plumage, is a native of the higher and colder regions of India. It is greatly admired by the natives of India, who have given it the name Monal, or the bird of gold. The metallic luster of its plumage is so very marked that some authorities have been led to give this bird the specific name *resplendens*. The plumage of the males of nearly all the pheasants is quite as strikingly brilliant, while that of the female is much more somber.

"The monal is found on almost every hill of any elevation, from the first great ridge above the plains to the limits of forest, and in the interior it is the most abundant of our game birds."

When the severe weather of winter sets in, the pheasants descend into the forests of lower altitudes, where the ground is covered with a thick layer of decaying leaves. Here they find an ample supply of insect food. Though a few of the older birds remain in higher altitudes throughout the winter, the majority descend to lower levels, and in the spring again ascend the mountain sides, as the snow and frost disappear.

"The call of the monal is a loud, plaintive whistle,

which is often heard in the forest at daybreak or toward evening, and occasionally at all hours of the day." It is an omnivorous feeder, its food consisting of grains and other seeds, insects, fleshy roots, and succulent herbage. The length of its wings, which are very short for the size and weight of the bird, shows the Impeyan Pheasant to possess terrestrial habits. Its flights, though quite rapid, are short, and taken, as a rule, only when frightened.

The impeyan pheasant does not seem to bear a change of climate. Many attempts to domesticate them have been made in several countries.

GOLDEN PHEASANT

This beautiful bird is a native of China, as are most of the pheasants. It is being bred with partial success in various places in the United States; for years it has graced city parks. The introduction of these birds into Washington and Oregon has been successful. Great flocks of them are seen in the fields and at the edges of the woods. They have been protected by law until they are so numerous that a limited open season for hunting is now allowed.

In various other States these fine birds have been introduced with varying success. In Illinois, Missouri, and various places in New York and the New England States enterprising citizens have placed colonies of them. If they are kept within an enclosure until they become used to the locality, they seem to remain and increase in number; if not, they often scatter and are killed by hunters who mistake them for tropical birds.

GOLDEN PHEASANT
½ Life size

SILVER PHEASANT
(Phasianus nycthemerus
L.) Linnæus.

The flesh, as in the case of other pheasants, is fine eating, but the beauty is such that one is reluctant to kill them for food. The bright artificial fish baits are usually made from the tips of the bright-colored feathers.

THE SILVER PHEASANT*

The magnificent Silver or Penciled Pheasant, a native of China, which has long been introduced into Europe, has been considered to be fitted only for the aviary. The pheasant was long thought to have been brought from the banks of the River Phasis, now the Rioni, in Colchis, and introduced into Europe by the Argonauts. Newton says that, as a matter of fact, nothing is known on this point; and, judging from the recognition of the remains of several species referred to, both in Greece and in France, it seems not impossible that the ordinary pheasant may have been indigenous to England.

It was thought only a few years ago that the successful propagation of pheasants was problematical, but now the Mongolian, the English ring-necked, and the Chinese golden pheasant each has found a home in some of the States, where it is increasing in numbers. Why may not a similar experiment be made with the silver pheasant?

In England within recent years the practice of bringing up pheasants by hand has been extensively followed, and the numbers so reared, says Newton, vastly exceed those that are bred at large. The eggs are collected from birds that are either running wild or kept in a mew, and are placed under domestic hens; but, though these prove most

attentive foster-mothers, much additional care on the part of the keepers is needed to insure the arrival at maturity of the chicks; for, being necessarily crowded in a comparatively small space, they are subject to several diseases which often carry off a large proportion, to say nothing of the risk they run of not being provided with proper food or of meeting an early death from some predatory animal.

RING-NECKED PHEASANT

The Ring-necked Pheasant, a native of China, has been introduced and acclimated in the States of California, Oregon, and Washington, and also in British Columbia. In many localities they have become so abundant that an open season is allowed for hunting them. So beautiful are they that taxidermists are kept busy in the open season mounting these birds as an article of commerce. Some of the Central and Western States have introduced these pheasants with more or less success. Dr. Dawson, in his "Birds of Ohio," says: "The successful introduction into our State of this splendid game bird really marks a new era in the history of sports, and its event should be hailed with delight by all true sportsmen. Quick on the wing, rapid, prolific, hardy, this handsome pheasant is admirably adapted to take the place of those larger native game birds, the wild turkey, the prairie chicken, and the ruffed grouse, which are no longer available to us." They, like grouse, more than pay for the grain they consume, by destroying insects. It is said the bird introduced with the greatest success is a cross between the English ring-necked and Mongolian pheasants.

RING-NECKED PHEASANT.
(Phasianus torquatus).

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GREEN JAPANESE PHEASANT
(Phasianus [illegible])

THE JAPAN PHEASANT*

Originally the pheasant was an inhabitant of Asia Minor, but has been by degrees introduced into many countries, where its beauty of form, plumage, and the delicacy of its flesh made it a welcome visitor. The Japan Pheasant is a very beautiful species, about which little is known in its wild state, but in captivity it is pugnacious. It requires much shelter and plenty of food, and the breed is to some degree artificially kept up by the hatching of eggs under domestic hens and feeding them in the coop like ordinary chickens, until they are old and strong enough to get their own living.

The food of this bird is extremely varied. When young it is generally fed on ants' eggs, maggots, grits, and similar food, but when it is full grown it is possessed of an accommodating appetite, and will eat many kinds of seeds, roots, and leaves. It will also eat beans, peas, acorns, berries, and has even been known to eat the ivy leaf, as well as the berry.

This pheasant loves the ground, runs with great speed, and always prefers to trust to its legs rather than to its wings. It is crafty, and when alarmed it slips quickly out of sight behind a bush or through a hedge, and then runs away with astonishing rapidity, always remaining under cover until it reaches some spot where it deems itself safe. The male is not domestic, passing an independent life during a part of the year, and associating with others of its own sex during the rest of the season.

The nest is very rude, being merely a heap of leaves and

grass on the ground, with a very slight depression. The eggs are numerous, about eleven or twelve, and olive-brown in color. In total length, though they vary considerably, the full-grown male is about three feet. The female is smaller in size than her mate, and her length a foot less.

THE DOMESTIC FOWL*

The writers of antiquity used the term fowl to include all the members of the bird tribe, and, in some cases, the young of other animals. Feathered creatures, no matter what their habits, were not called birds, neither were they separated into classes other than the "Fowls of the Air," "Fowls of the Sea," "Fowls of the Earth," and similar descriptive divisions.

In the seventeenth and the earlier part of the eighteenth century the word fowl was applied to any large feathered animal and the term bird to those of less size. In early times the word bird was used in the sense of brood and included the young of all animals. In an early act of Parliament of Scotland we find the expression "Wolf-birdis," referring to the very young wolf.

At the present time the term fowl in its wider sense is generally used to include all the forms of farm poultry, both when living and when prepared for food. More specifically, it is applied to the domestic cock and hen, or, as they are more familiarly called, chickens. The word chicken appropriately belongs to the common fowl when under one year of age, yet it is used to indicate those of any breed and of any age between birth and maturity. In this connection

ROOSTER AND HEN.

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it is of interest to note that in the English language the common fowl has no distinctive name. The term hen, frequently used, should be applied only to the female of this and other domestic fowls.

The progenitor of the common fowl is generally conceded to be the Red Jungle Fowl, though there are three other wild species, all oriental. This species is a native of India, a part of China, the adjacent islands, and the Philippines. Its habits are diversified, for we are told it may "be found in lofty forests and in the dense thickets, as well as in bamboo jungles, and when cultivated land is near its haunts it may be seen in the fields, after the crops are cut, in straggling parties of from ten to twenty."

This wild species closely resembles the breed of poultry fanciers called the "Blackbreasted Game," but the crow of the wild cock is not as loud or prolonged as that of the tame one.

FARM-YARD FOWLS*

Silver-spangled Hamburg. These fowls are among the most highly developed of all the spangled varieties. They are valued as egg producers and rank among the best. They are very impatient of confinement, and are said to succeed best when they can have the run of a clean pasture or common. A large grass walk is recommended by the most successful breeders. Six-foot fences, where they are intended to be restricted to certain limits, will not be more than sufficient for the safe custody of these chickens. The hens, if young, lay nearly throughout the year, but the eggs, which are white, are small, weighing about one and one-half

ounces each. As they are such abundant layers, they seldom want to sit. The chickens are healthy and strong, requiring no unusual care. When first hatched they are cream-colored. They feather early and the barred character of the penciled birds quickly appears. In the rapidity of their movements they are said to rival even the active little bantams.

Plymouth Rock Hen and Chickens. In March, 1873, Rev. H. H. Ramsdell thus describes the origin of this valued fowl:

"Some thirty years since, John Giles, Esq., introduced a fowl into this vicinity — Putnam, Conn. — called the Black Java. Its plumage was black and glossy, its size large, pullets sometimes reaching eleven pounds in weight. It was an unusually hardy bird, with a dark, slate-colored, smooth leg and the bottom of the feet yellow. The hens proved good layers and of extra quality for the table. I sold a few of these birds to a Mr. Thayer, of Pomfret, of whom Mr. George Clark, of Woodstock, Conn., purchased some he supposed the same. Mr. Clark, passing Mr. Joseph Spaulding's yard one day, noticed his fine flock of Dominiques and proposed bringing a few of his Javas over to cross with them, to increase the size. Mr. Spaulding accepted the offer, and when the chickens were grown rejected the black ones and those with double comb, reserving to breed from only the single-comb birds, which retained the Dominique color, or near it. One of the first products from the eggs of this cross was a hen which weighed nine and three-fourths pounds. We soon had a fine flock of them. The fowls were spread around the neighborhood

BLACK GROUSE.
(Tetrao tetrix).

and were much sought after, but had as yet no name. A gentleman asked me what I called them. I said, 'Plymouth Rock.' The name passed from one to another and they were soon generally known by that name."

THE BLACK GROUSE*

Well known as the Black Cock is supposed to be, we fancy few of our readers have ever seen a specimen. It is a native of the more southern countries of Europe, and still survives in many portions of the British Islands, especially those localities where the pine woods and heaths afford it shelter, and it is not driven away by the presence of human habitation.

The male bird is known to resort at the beginning of the nesting season to some open spot, where he utters his love calls, and displays his new dress to the greatest advantage, for the purpose of attracting as many females as may be willing to consort with him. His note when thus engaged is loud and resonant, and can be heard at a considerable distance. This crowing sound is accompanied by a harsh, grating, stridulous kind of cry, which has been compared to the noise produced by whetting a scythe. The black cock does not pair, but leaves his numerous mates to the duties of maternity and follows his own desires while they prepare their nests, lay their eggs, hatch them, and bring up the young.

The nest is carelessly made of grasses and stout herbage, on the ground, under the shelter of grass and bushes. There are from six to ten eggs of yellowish-gray, with spots

of light brown. The young are fed first upon insects, and afterwards on berries, grain, and the buds and shoots of trees.

The coloring of the female is quite different from that of the male grouse. Her general color is brown, with a tinge of orange, barred with black and speckled with the same hue, the spots and bars being larger on the breast, back, and wings, and the feathers on the breast more or less edged with white.

THE CRESTED CURASSOW*

An interesting race of birds, known as the Curassows, has its range throughout that part of South America east of the Andes Mountain range and north of Paraguay. All the species are confined to this region except one, which is found in Central America and Mexico. This is the bird of our illustration.

The curassows belong to the order of gallinaceous birds, and bear the same relation to South America that the pheasants and grouse bear to the Old World. They are in every respect the most important and the most perfect game birds of the district which they inhabit. In all there are twelve species, placed under four genera. As the hind toes of the feet are placed on a level with the others, they resemble the pigeon and are unlike many of the other gallinaceous birds.

The curassows are very large and rather heavy birds, and some of them are larger than our turkey. They have short wings and a strong bill. "They live in small flocks,

CRESTED CURASSOW.
(Crax globicera.)
¼ Life-size.

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PEACOCK.

and are arboreal in their habits, only occasionally descending to the ground, while roosting and building their nests on the branches of trees." The nests are large and made of twigs and willowy branches held in place by the stems of grasses, which are neatly interwoven between them. The nest is lined with down, feathers, and leaves.

It is said that they are easily domesticated, and that in some parts of South America they may be found in tame flocks around the homes of the planters. Though a tropical bird, it would seem that they might be acclimatized. They would certainly form a valuable addition to the list of our farm fowls, for their flesh is said to be "exceedingly white and delicate."

The female is not as large as the male, and is usually reddish in color. Their food consists almost entirely of fruit and insects.

THE PEACOCK*

It was a saying among the ancients, "As beautiful as is the Peacock among birds, so is the tiger among quadrupeds." The birds are of many varieties, some white, others with crests; that of Thibet being considered the most beautiful of the feathered creation. The first specimens were brought to Europe from the East Indies, and they are still found in flocks in a wild state in the islands of Java and Ceylon. The common people of Italy describe it as having the plumage of an angel, the voice of a devil, and the intestines of a thief. In the days of King Solomon, his navies imported from the East apes and peacocks, and Ælian relates they were brought into Greece from some barbarous

country, and that a male and a female were valued at a hundred and fifty dollars of our money. It is said also that when Alexander was in India he saw them flying wild on the banks of the River Hyarotis, and was so struck with their beauty that he imposed a fine on all who should slay or disturb them. The Greeks were so much taken with the beauty of this bird, when first brought among them, that it was shown for money, and many came to Athens from surrounding countries to see it. It was esteemed a delicacy at the tables of the rich and great, and the birds were fatted for the feasts of the luxurious. Barley is its favorite food, but as it is a proud and fickle bird, there is scarce any food it will at all times like. It lays waste the labors of the gardener, roots up the choicest seeds, and nips favorite flowers in the bud. The peahen seldom lays above a dozen eggs, which are generally hatched about the beginning of November. Though the peafowls invariably roost in trees, yet they make their nests on the ground, and ordinarily on a bank raised above the common level. The nest consists of leaves and small sticks.

The female is much smaller than her mate, and not nearly so handsome, the train being almost wanting, and the color ashy-brown, with the exception of the throat and neck, which are green.

The peacock lives about twenty years, and the beautiful variegated plumage of the male's train appears about the third year after birth. His train, though popularly called his tail, is in reality composed of the upper tail coverts, which are enormously lengthened and finished at their extremities with broad, rounded webs, or spear-shaped ends.

CROWNED PIGEON.
(Goura coronata)
Lesson.

THE CROWNED PIGEON

The Crowned Pigeon is the giant among pigeons. These birds pair for life, and the loss or death of a mate is in many cases mourned and grieved over, the survivor frequently refusing to be consoled.

J. G. Wood gives the following description of this interesting bird:

"The splendid crowned pigeon is indisputably the most conspicuous of all its tribe, its great size and splendid crest rendering it a most striking object, even at a considerable distance.

"So large and un-pigeonlike is this bird that few, on first seeing it, would be likely to determine its real relations to the rest of the feathered race, and would be more likely to class it among the poultry than the pigeons. If, however, the reader will lay a card upon the crest, so as to expose only the head, he will see that the general outline of the head and beak is clearly that of a pigeon. It is a native of Java, New Guinea, and the Moluccas.

"The cry of this bird is loud and sonorous, a kind of mixture between a trombone and a drum, and every time the bird utters this note it bows its head so low that the crest sweeps the ground.

"The nest of the crowned pigeon is said to be made in trees, the eggs being two in number, as is generally the case with this group of birds.

"The general color of this bird is a deep and nearly uniform slate-blue; that of the quill feathers of the wings and

tail being a very blackish-ash, and a patch of pure white and warm maroon being found on the wings."

N. M.

HOMING PIGEON*

Utilization of the homing instinct of the domesticated varieties of the Blue Rock pigeon, the *Columba livia,* by employing the birds as messengers, has long been in use.

The carrier pigeon obeys the one governing impulse of its small heart when, released at a distance from its mate and its nest, it turns with marvelous fidelity to its home cote. With no compass except that home-seeking instinct, no reliance except in the exquisitely adjusted beat of its wings, it soars upward until its keen eyesight and quick perceptions give certainty of direction; then at a splendid pace of fourteen hundred yards in a minute, it speeds on its journey home.

Once a male bird has regularly mated, he will fly back to his duties as a husband and father as fast as he can. These duties are serious and practical, for the male bird bears his full share in sitting upon the eggs and in feeding the nestlings when hatched, for which purpose both cock and hen possess special faculties and functions. The homing tendency acts best when it is entirely concentrated. For example, it has been found that a mated pair will not fly home together with anything like proper certainty. They stop and dally by the way; they behave like holiday people who have "got somebody to mind the babies."

In order to have trustworthy messengers for war or peace, the pigeons must not be bachelors or loafers, nor be

HOMING PIGEON
¼ Life-size.

AUSTRALIAN GRASS PARRAKEET
(Melopsittacus undulatus)
Lifesize.

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flown with associates; they must be the respectable mated birds with establishments, so that in employing them for war messengers one actually presses domestic virtue, as well as love and parental instinct, into the service of the military. But even the peaceful pigeon can be sometimes pugnacious on his own account, and a jealous fantail, or tumbler, or Antwerp, or Jacobin, often will conduct himself like a game cock.

THE AUSTRALIAN PARRAKEET*

Parrakeets have a great fondness for the grass lands, where they may be seen in great numbers, running amid the thick grass blades, clinging to their stems, or feeding on their seeds.

Grass seed is their constant food in their native country. In captivity they take well to canary seed, and what is remarkable, they never pick food with their feet, as do other species of parrots, but always use their beaks. "They do not build a nest, but must be given a piece of wood with a rough hole in the middle, which they will fill to their liking, rejecting all soft lining of wool or cotton that you may furnish them."

Only the male sings, warbling nearly all day long, pushing his beak at times into his mate's ear as though to give her the full benefit of his song. The lady, however, does not seem to appreciate his efforts, but generally pecks him sharply in return.

A gentleman who brought a parrakeet from Australia to England says it suffered greatly from the cold and

change of climate, and was kept alive by a kind-hearted, weather-beaten sailor, who kept it warm and comfortable in his bosom. It was not kept in a cage, but roamed at will about the room, enjoying greatly at times a ride on the cat's back. At meals he perched upon his master's shoulder, picking the bits he liked from a plate set before him. If the weather was cold or chilly, he would pull himself up by his master's whiskers and warm his feet by standing on his bald head. He always announced his master's coming by a shrill call, and no matter what the hour of night, never failed to utter a note of welcome, although apparently asleep with his head tucked under his wing.

THE DOUBLE YELLOW-HEADED PARROT*

Here we have a picture of the best, with possibly one exception — the African Gray — of the talking parrots. Its home is in Mexico, about the wooded bottoms of La Cruz River, in the Province of Taumaulipas, on the east coast. The only Mexican parrot that is in general demand as a talking pet is the Double Yellow-head, which with age develops a yellow hood that extends completely over its head and shoulders.

The parrot builds no nest. The female selects a deep hollow in the highest tree trunk, and there lays two eggs. This occurs about the first of May. The young are hatched about the 15th of June; ten days elapse before they can open their eyes, and several weeks must be allowed for the young birds to outgrow their squab state and gain sufficient strength to be removed from the care of their parents. The

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DOUBLE YELLOW-HEADED PARROT

OWL PARROT (NEW ZEALAND).
(Strigops habroptilus).
⅓ Life-size.

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parrot is a wily and wise bird. It lays its eggs safely out of reach of ordinary danger, and takes good care not to betray their whereabouts. When the young birds are hatched they are fed twice a day by their elders, early in the morning and again about the close of day. The birds, in feeding their young, give vent to a series of contented clucks and chuckles, which is answered by the young ones. These birds live on mangoes and the nuts of the ebony tree.

THE OWL PARROT*

The Australian continent and New Zealand, as everybody knows, are the countries where everything goes by contraries. And it is here that the parrot group has developed some of its most curious offshoots. One would imagine beforehand that no two birds could be more unlike in every respect than the gaudy, noisy, gregarious cockatoos and the somber, nocturnal, solitary owls. Yet the New Zealand Owl Parrot is a lory which has assumed all the appearances and habits of an owl. A lurker in the twilight or under the shades of night, burrowing for its nest in holes in the ground, it has dingy brown plumage like the owls, with an undertone of green to bespeak its parrot origin; while its face is entirely made up of two great disks, surrounding the eyes, which succeed in giving it a most marked and unmistakable owl-like appearance.

Why should a parrot so strangely disguise itself and belie its ancestry? The reason is not difficult to discover. It found a place for itself ready-made in nature. New Zealand is a remote and sparsely-stocked island, peopled by

various forms of life from adjacent but still distant continents. There are no dangerous enemies there. Here, then, was a great opportunity for a nightly prowler. The owl parrot, with true business instinct, saw the opening thus clearly laid before it, and took to a nocturnal and burrowing life, with the natural consequence that those forms survived which were dingy in color. Unlike the owls, however, the owl parrot, true to the vegetarian instincts of the whole lory race, lives almost entirely upon sprigs of mosses and other creeping plants. It is thus essentially a ground bird; and as it feeds at night in a country possessing no native beasts of prey, it has almost lost the power of flight, and uses its wings only as a sort of parachute to break its fall in descending from a rock or a tree to its accustomed feeding ground.

KING PARROT OR KING LORY*

Lory is the name of certain birds, mostly from the Moluccas and New Guinea, which are remarkable for their bright scarlet or crimson coloring, though also applied to some others in which the plumage is chiefly green. Much interest has been excited by the discovery of Dr. A. B. Major that the birds of this genus having a red plumage are the females of those wearing green feathers. For a time there was much difference of opinion on this subject, but the assertion is now generally admitted.

They are called "brush-tongued" parrots. The color of the first plumage of the young is still unsettled. This bird is a favorite among bird fanciers, is readily tamed, and is of an affectionate nature. It can be taught to speak

KING PARROT.

GRAY PARRÓT (AFRICA)
(Psittacus erithacus)
Life-size

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very creditably, and is very fond of attracting the attention of strangers and receiving the caresses of those whom it likes.

There are few things a parrot prefers to nuts and the stones of various fruits. Wood says he once succeeded in obtaining the affections of a Parisian parrot, solely through the medium of peach stones, which he always saved for the bird, and for which it regularly began to gabble as soon as it saw him coming. "When taken freshly from the peach," he says, "the stones are very acceptable to the parrot, who turns them over, chuckling all the while to show his satisfaction, and picking all the soft parts from the deep indentations in the stone." He used to crack the stone before giving it to the bird, when his delight knew no bounds. They are fond of hot condiments, cayenne pepper or the capsicum pod. If a bird be ailing, a capsicum will often set it right again.

THE GREAT GRAY PARROT*

The common Gray Parrot, the best known in confinement of all his kind, and unrivaled as an orator for his graces of speech, is a native of West Africa. He feeds in a general way upon palm nuts, bananas, mangoes, and guavas, but he is by no means averse, if opportunity offers, to the Indian corn of the industrious native. It is only in confinement that this bird's finer qualities come out, and that it develops into a distinguished speechmaker.

As a group, the parrots must be comparatively modern birds. Indeed, they could have no place in the world until

the big tropical fruits and nuts were beginning to be developed. And it is now generally believed that fruits and nuts are for the most part of recent and special evolution. To put the facts briefly, the monkeys and parrots developed the fruits and nuts, while the fruits and nuts returned the compliment by developing conversely the monkeys and parrots. In other words, both types grew up side by side in mutual dependence, and evolved themselves *pari passu* for one another's benefit. Without the fruits there could be no fruit-eaters; and without the fruit-eaters, to disperse their seeds, there could not be any great number of fruits.

Most of the parrots very much resemble the monkeys and other tropical fruit-eaters in their habits and manners. They are gregarious, mischievous, and noisy. They have no moral sense, and are fond of practical jokes. They move about in flocks, screeching aloud as they go, and alight together on some tree well covered with berries. No doubt they herd together for the sake of protection, and screech both to keep the flock in a body and to strike consternation into the breasts of their enemies.

THE ROSE-BREASTED COCKATOO*

The Rose Cockatoo, as may be seen, is a remarkably handsome bird. The species is gregarious, and they are very numerous in South Australia, where they frequent woods and feed on seeds, fruits, and larvæ of insects. Their note is harsh and unmusical. The young ones tame readily and some species show remarkable intelligence. They associate in flocks of from one hundred to one thousand and do

ROSE-BREASTED COCKATOO
(Psittacus roseicapillus)
½ Life-size.

BY A. W. MILLIGAN, CHICAGO

BLUE MOUNTAIN LORY. .
(Psittacus swainsonii).
¾ Life-size.

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great damage to newly planted grain, for which reason they are mercilessly destroyed by farmers. Two eggs, of a pure white color, are laid in the holes of decayed trees or in the fissures of rocks, according to the nature of the locality in which they live.

This is a rather large bird, equalling a common fowl in dimensions and assuming a much larger form when it ruffles up its feathers while under the influence of anger. Many of these birds are fine talkers, and their voice is peculiarly full and loud.

The cockatoo is not gifted with the wonderful imitating powers of the true parrot, and, on account of its deafening cries, it is not an agreeable inhabitant of the house. It is in a state of nature that the birds are most interesting. They are not shy or wary, are very vociferous, and, like the common parrots, rise up in bodies toward sunset and fly two-and-two to their resting places. It is a superb sight to see thousands of these beautiful creatures flying overhead, low enough to permit a full view of their feathered mantles.

THE MOUNTAIN LORY*

This bird inhabits the vast plains of the interior of New South Wales. It is one of the handsomest, not only of the Australian parrots, but takes foremost place among the most gorgeously dressed members of the parrot family that are to be met with in any part of the world. It is about eleven or twelve inches in length. The female cannot with certainty be distinguished from her mate, but is

usually a very little smaller. The lory seldom descends to the ground, but passes the greater part of its life among the gum trees, upon the pollen and nectar of which it mainly subsists. In times of scarcity, however, it will also eat grass seeds, as well as insects, for want of which, it is said, it often dies prematurely when in captivity.

Despite his beauty, the Blue Mountain Lory is not a desirable bird to keep, as he requires great care. A female which survived six years in an aviary, laying several eggs, though kept singly, was fed on canary seed, maize, a little sugar, raw beef, and carrots.

Like all the parrot family, these lories breed in hollow boughs, where the female deposits from three to four white eggs, upon which she sits for twenty-one days. The young from the first resemble their parents closely, but are a trifle less brilliantly colored.

They are very active and graceful, but have an abominable shriek. The noise is said to be nearly as disagreeable as the plumage is beautiful. They are very quarrelsome and have to be kept apart from the other parrots, which they will kill. The feathers of the head and neck are long and very narrow and lie closely together; the claws are strong and hooked, indicating their tree-climbing habits.

THE COCK-OF-THE-ROCK*

The Cock-of-the-rock lives in Guiana. Its nest is found among the rocks.

The eggs are described as pale buff, with various-sized spots of shades from red-brown to pale lilac.

COCK-OF THE ROCK

RESPLENDENT TROGON.

¼ Life-size

It is a solitary and wary bird, feeding before sunrise and after sunset and hiding through the day.

Robert Schomburgh describes its dance as follows:

"While traversing the mountains of western Guiana we fell in with a pack of these splendid birds, which gave me the opportunity of being an eye-witness of their dancing, an accomplishment which I had hitherto regarded as a fable. We cautiously approached their ballet ground and place of meeting, which lay some little distance from the road. The stage, if we may so call it, measured from four to five feet in diameter; every blade of grass had been removed and the ground was as smooth as if leveled by human hands. On this space we saw one of the birds dance and jump about, while the others evidently played the part of admiring spectators. At one moment it expanded its wings, threw its head high in the air, or spread out its tail like a peacock, scratching the ground with its foot; all this took place with a sort of hopping gait until tired, when, on emitting a peculiar note, its place was immediately filled by another performer. In this manner the different birds went through their terpsichorean exercises, each retiring to its place among the spectators, who had settled on the low bushes near the stage."

THE RESPLENDENT TROGON*

Resplendent Trogons are natives of Central America. There are fifty kinds, and this is the largest.

Of all birds, there are few which excite so much admiration as the resplendent trogon.

The skin is so singularly thin that it has not inaptly been compared to wet blotting paper, and the plumage has so light a hold upon the skin that when the bird is short the feathers are plentifully struck from their sockets by its fall and the blows which it receives from the branches as it comes to the ground.

Its eggs, of a pale bluish-green, were first procured by Mr. Robert Owen. Its chief home is in the mountains near Coban, in Vera Pas, but it also inhabits forests in other parts of Guatemala at an elevation of from 6,000 to 9,000 feet.

The cries of the trogon are various. They consist principally of a low note, whe-oo, whe-oo, which the bird repeats, whistling softly at first, then gradually swelling it into a loud and not unmelodious cry. This is often succeeded by a long note, which begins low, and, after swelling, dies away as it began. Other cries are harsh and discordant. The flight of the trogon is rapid and straight. The long tail feathers, which never seem to be in the way, stream after him. The bird is never found except in forests of the loftiest trees, the lower branches of which, being high above the ground, seem to be its favorite resort. Its food consists principally of fruit, but occasionally a caterpillar is found in its stomach.

THE NIGHTINGALE*

The Nightingale is usually regarded as an English bird, and it is abundant in many parts of the midland, eastern, and western counties of England, and the woods, coppices, and gardens ring with its thrilling song. It is also found,

NIGHTINGALE.
(Motacilla luscinia).
¾ Life-size

ROBIN REDBREAST
(Erithacus rubecula).
½ Life-size.

however, in large numbers in Spain and Portugal, and occurs in Austria, upper Hungary, Persia, Arabia, and Africa, where it is supposed to spend its winters.

The markings of the male and female are so nearly the same as to render the sexes almost indistinguishable.

They cannot endure captivity, nine-tenths of those caught dying within a month. Occasionally a pair have lived, where they were brought up by hand, and have seemed contented, singing the song of sadness or of joy.

The nest of the nightingale is of a rather uncommon kind, being placed on or near the ground, the outworks consisting of a great number of dead leaves ingeniously put together. It has a deep, cup-like hollow, neatly lined with fibrous roots, but the whole is so loosely constructed that a very slight touch disturbs its beautiful arrangement. There are laid from four to six eggs of a deep olive color.

Towards the end of summer the nightingale disappears from England, and, as but little has been observed of its habits in its winter retreats, which are assumed to be in the interior of Africa, little is known concerning them.

It must be a wonderful song indeed that could inspire the muse of great poets as has that of the nightingale.

ROBIN REDBREAST*

This typically foreign bird must not be confounded with the American robin. This bird is the Robin Redbreast of childhood tales and has been the inspiration of many writers of prose as well as of poetry. In no part of its range, which covers the whole of Europe, the northern portion of Africa,

and eastern Asia, is the redbreast so revered as in England. Its sprightly air, inquiring and sagacious demeanor, its intelligence, and its trust in man make the redbreast a general favorite.

The redbreast not only remains at a distance from other small birds, but also shuns the society of its fellows. No matter how numerous the individuals may be in some hedge, each is for itself, and the truthfulness of the old saying, "One bush does not harbor two redbreasts," is apparent. Though bold and pugnacious, it does not appear that the males often give battle to each other for possession of a mate. Their solitary habits would preclude such battles. But once they have selected a breeding locality and built their home, they exhibit much resolution and in a most determined manner resist the intrusion of all other birds.

Though far from neighborly, the male is always very attentive to his mate. He seldom leaves her long, and never goes far away. With his sweet voice he is constantly encouraging her with song during the whole period of incubation. When the baby birds appear he gallantly helps his mate to feed the little ones, no light task, for the young number five to seven.

Usually the site selected for the nest is concealed by a dense foliage. If such a site is not obtainable, the birds will often conceal the nest by an ingenious arrangement of dry leaves. This interesting bird-home may be placed almost anywhere, and sometimes the oddest places seem best to satisfy the whims of this little bird.

Not only is the redbreast an interesting bird, but it is an exceedingly useful one, as it destroys insects on the lawns

KING BIRD OF PARADISE
¼ Life-size.

COPYRIGHT 1900 BY A. W. [illegible]

and among the shrubs and flowers. When hunting upon the ground it approaches its prey with rapid hops, and seldom misses as it pounces upon caterpillars, beetles, moths, earthworms, and flies. When insect food is scarce, and even at other times, the redbreast enjoys the crumbs of the door-yard.

THE KINGBIRD OF PARADISE*

The sublime is no nearer the ridiculous in literature than in the things of nature. An instance of this is the close relation of the common crow to the most glorious bird of them all. Not only are they very much alike in general form, including shape of feet, bill, bones, and ordinary feathering, but also in habit. They seem to delight in the same sorts of food and secure it in much the same manner. When they are happiest and attempt to pour forth their songs of joy the voice of the crow is fully as melodious and satisfactory to the human ear as is that of the bird of paradise.

While the males have not only a splendid growth of delicate floating feathers of very unusual length and glossy fineness of texture, the females have but little more to boast of than our American crow, and they even lack the degree of luster which our black friend frequently exhibits. But the males are adorned with a wealth of color display, rich in velvety softness and blazing with metallic luster. This luster cannot be appreciated from the appearance of the faded specimens so often seen in the museums, which may have suffered, not alone from dust and exposure for years to the chemical action of light, but have also been sadly

diminished in glory by the rude arts of the natives, who fumigate the skins with burning sulphur, their principal care seeming to be to get enough of it deposited to make sure of the skins not being attacked by insects.

The King Bird of Paradise is a small bird, measuring but little over six inches in length. It is extremely vivacious, flying about and running with but little show of the dignity of its family. Very fond of fruits, it is not satisfied with attacking those which other birds of its size would choose, but enjoys showing its gormandizing powers by devouring as much as possible of the largest specimens within reach.

THE SKYLARK*

The English Skylark has been more celebrated in poetry than any other song-bird.

"By the first streak of dawn," says one familiar with the skylark, "he bounds from the dripping herbage, and on fluttering wings mounts the air for a few feet ere giving forth his cheery notes. Then upward, apparently without effort he sails, sometimes drifting far away as he ascends, borne, as it were, by the ascending vapors, so easily he mounts the air. His notes are so pure and sweet, and yet so loud and varied withal, that when they first disturb the air of early morning all the other little feathered tenants of the fields and hedgerows seem irresistibly compelled to join him in filling the air with melody." The lark sings just as richly on the ground as when on quivering wing. When in song he is said to be a good guide to the weather, for whenever we see him rise into the air, despite the gloomy

SKYLARK.

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CRESTED TITMOUSE (Europe).
(Parus cristatus).
Life-size.

looks of an overcast sky, fine weather is invariably at hand.

The nest is most frequently in the grass fields, sometimes amongst the young corn, or in places little frequented. It is made of dry grass and moss and lined with fibrous roots and a little horse hair. The eggs, usually four or five in number, are dull white, spotted, clouded, and blotched over the entire surface with brownish-green. The female lark, says Dixon, like all ground birds, is a very close sitter, remaining faithful to her charge. She regains her nest by dropping to the ground a hundred yards or more from its concealment.

The food of the lark is varied; in spring and summer, insects and their larvæ, and worms and slugs; in autumn and winter, seeds.

THE EUROPEAN CRESTED TITMOUSE*

Sprightly and restless, the Crested Titmouse of Europe frequents the topmost branches of secluded forests in northern Europe. Hopping from twig to twig, flying from branch to branch, and seeming always in motion, the little bird peers under leaves and into the crevices of the bark, diligently searching for its food of insects, of which it consumes a large number. Of a shy and retiring disposition, it has a decided liking for forests of coniferous trees, where its diminutive form and the compact foliage protect it from intruders of all kinds, while it readily finds an abundant supply of food. It is a rare bird in the central and southern parts of the European continent and in Great Britain.

In an economic sense it is a most useful bird, as it feeds

upon insects in all the stages of their development. It also feeds upon the seeds of various cone-bearing trees. Constantly active, the crest of this beautiful bird gives it an added dignity as it seeks its food, leads a flock, or quarrels with one of its kind, as it often does during the nesting season.

Probably because of its nesting habits, the crested titmouse seems to like those cone-bearing forests in which there are also deciduous trees. Its nest of grasses, moss, lichens, feathers, hair, and other soft materials is usually placed in a hole of some tree or stump. Not infrequently, however, the deserted holes of squirrels or the old nests of crows and magpies are selected.

The European crested titmouse would be a popular bird and much better known were it not for the difficulty of studying the habits of so small an object in the dense and extensive forests which it frequents. Its characteristics can only be satisfactorily observed when it is compelled to seek its food in more open places.

THE EUROPEAN SONG THRUSH*

The Song Thrush of Europe is a beautiful and familiar bird of sprightly habits and wonderful power of song. Sing it must, for it possesses a happy nature. In England and Scotland the thrushes sing from the month of January to that of October. Its blithe song indicates a contented nature and that its larder is full to overflowing. Its voice is never heard amid desolation. Its home is not in the marshes nor in regions that are without trees or hedges.

EUROPEAN SONG THRUSH
(Turdus musicus).
¼ Life-size

The song thrush loves trees; the woods and hedges around plantations, even the bushes of gardens and the orchards, are to its liking, and there it is found. It prefers animal food and thus destroys vast numbers of snails, slugs, earthworms, larvæ, beetles, and other insects. When it cannot obtain animal food, it eats berries and seeds, and frequently commits great devastations among cultivated fruits. However, much of its food consists of animal forms that are highly detrimental to the growth of cultivated plants. It eats large numbers of snails which feed upon the early vegetables and upon the smaller fruits. Even before the snails have awakened from their winter's sleep the song thrush finds them in their cozy hiding places beneath hedges and under a covering of leaves, where they have been protected from the storms and the cold. So industrious are the thrushes in their search for snails "that the hedge-side is marked by a line of broken shells, as the birds fetch the snails out and batter the shells to pieces with their bills by hammering them against a stone."

The nest is usually built in a hedge, tree, or shrub, at no great height above the ground. In unwooded localities it is often placed in a crevice of a rock or at the base of a tuft of heath. Externally, the nest is composed of slender twigs, fine roots, grasses, and moss. It is lined with a thin layer of mud, dung, or rotten wood, upon which the eggs rest.

Not only is the male song thrush a beautiful singer, but it is also industrious and very attentive to its mate during the period of hatching their young. Two, and not infrequently three, broods are raised in a single season.

THE EUROPEAN GOLDFINCH*

This gay-plumaged and sprightly goldfinch is a native of the larger part of Europe, northern Africa, and eastern Asia. Throughout its range it is a most useful bird, as it feeds extensively on the seeds of weeds, especially those of thistles and related plants. Introduced into various localities in the New England States and New York City, it has seemingly become naturalized. Its nests have been found in Central Park, New York, where they "were placed in pine trees, among the tufts of long pine needles, near the end of a slender horizontal limb and about twelve feet from the ground."

The nests are compact and handsome structures made of fine, soft grasses, small roots, and vegetable fibers, mosses, and lichens, all woven together with wool and fibers, and finally lined with soft hairs and feathers. These homes have thick walls and are very substantial, and are models of neatness.

Sometime in March the beautiful male begins to sing. Somewhat crude at first, the song reaches perfection late in May. No matter what he is doing, he finds time to stop and from some perch utter a lovely song.

Few birds are more useful to man. The goldfinch feeds almost entirely upon the seeds of those plants that are equally injurious to both the cultivated field and the pasture. It is seldom found in marshes or in cultivated fields that are free from weeds. It frequents those waste places where there are thistles and related plants and weeds of

EUROPEAN GOLDFINCH.
(Fringilla carduelis.)
Life-size

CANARIES.
Life-size.

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the mustard family. Nearly all of these plants are most noxious to the agriculturist and several possess winged seeds that are easily transported by the winds. It is here that the goldfinch feeds most assiduously, and the number of seeds that a single bird will devour in a season is far beyond computation.

In color the female of the European goldfinch is very similar to the male, except that the tints are less brilliant.

THE CANARY

This favorite singer and cage bird is a native of the Canary Islands, Madeiras, Azores, and other small islands near the western coast of Africa. The islands are in the latitude of Florida and the climate may be said to be of a tropical character, though varied by lofty mountains. The canary in its native habitat is chiefly found in the mountainous districts, often several thousand feet above the level of the sea. The wild birds mate about the latter part of March. The nest is built in the tall trees of the evergreen species, frequently in the tops of these trees, and never less than eight or ten feet from the ground. We have seen it stated that they build on the ground, but this has been found to be an error.

The first canaries known to Europeans were brought from there by a merchant ship trading with the Canary Islands. The climate has had much to do with the change of color in these birds. The canary, which in its native home at Teneriffe is almost brown, becomes yellow and sometimes nearly white after being bred a few years in the

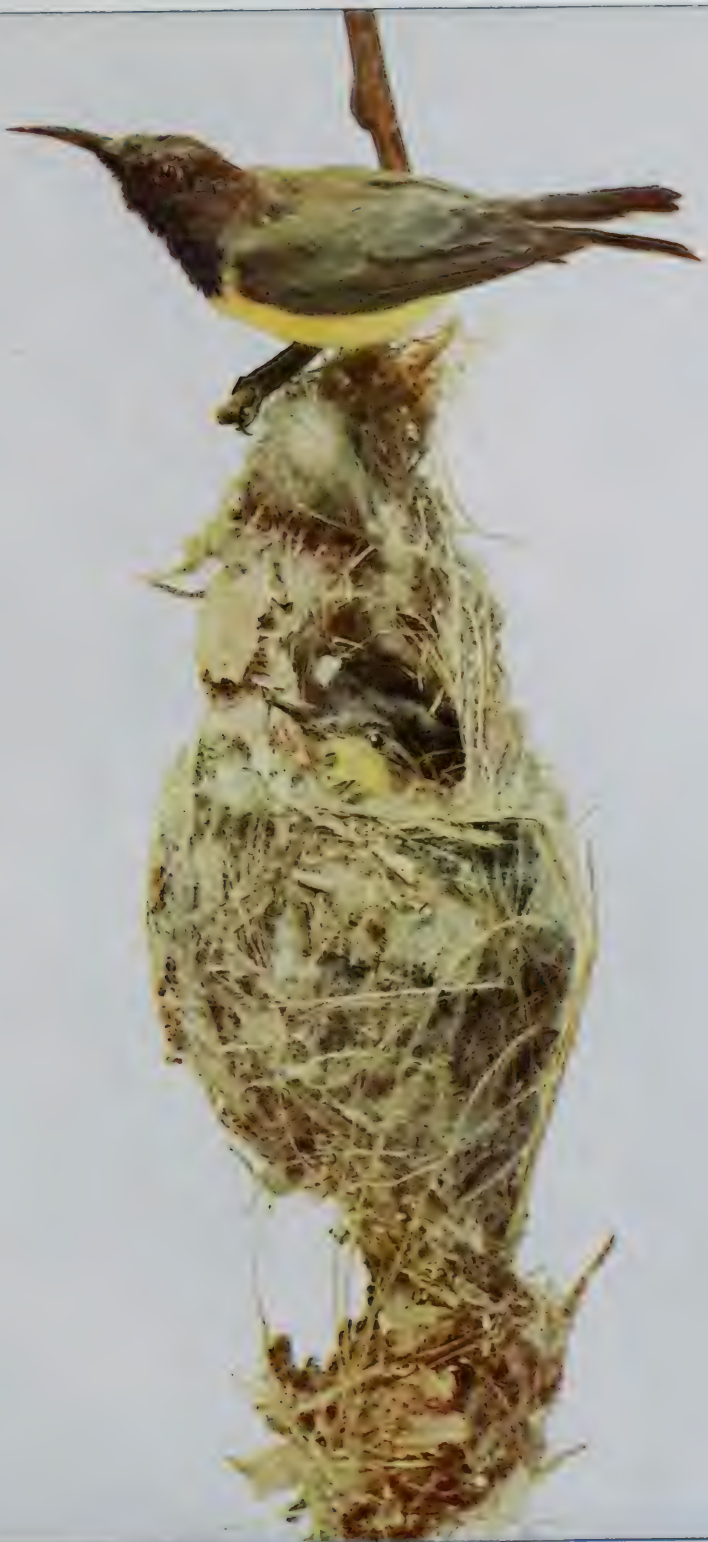
north, and it has been observed by naturalists that the winter fur of animals and feathers of birds become thicker and lighter in color in proportion to the coldness of the climate which they inhabit.

In England and Germany canary societies have existed for upwards of a century, and annual shows or exhibitions are held, with prizes offered for the best birds.

Of the many varieties of canaries, the most popular in the United States is the German. It is smaller than the English canary and is a much finer singer, being bred and trained for song and not for size. They are called Hartz Mountain canaries, and experts consider them the most satisfactory bird for the people. They are bred by the peasants in ordinary living-rooms high up among the Hartz Mountains of Germany. C. C. M.

THE PHILIPPINE SUN-BIRD*

The sun-birds bear a similar relation to the oriental tropics that the humming-birds do to the warmer regions of the Western Hemisphere. Both have a remarkably brilliant plumage, which is in harmony with the gorgeous flowers that grow in the tropical fields. It is probable that natives of Asia first gave the name sun-birds to these bright creatures because of their splendid and shining plumage. By the Anglo-Indians they have been called humming-birds, but they are perching birds, while the humming-birds are not. There are over one hundred species of these birds. They are graceful in all their motions and very active in their habits. Like the humming-birds, they flit from flower



PHILIPPINE YELLOW-BREASTED SUN-BIRD.
(Cinnyris jugularis).
Life-size.

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RED-RUMPED TANAGER.
(Ramphocoelus costaricensis.
Life-size.

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to flower, feeding on the minute insects which are attracted by the nectar, and probably to some extent on the honey, for their tongues are fitted for gathering it. However, their habit while gathering food is unlike that of the humming-bird, for they do not hover over the flower, but perch upon it while feeding. The plumage of the males nearly always differs very strongly from that of the females. The brilliantly colored patches are unlike those of the humming-birds, for they blend gradually and are not sharply contrasted, though the iridescent character is just as marked. The bills are long and slender, finely pointed, and curved. The edges of the mandibles are finely serrated.

The nests are beautiful structures suspended from the end of a bough, or even from the under side of a leaf. The entrance is near the top, and usually on the side. Over the entrance a projecting portico is often constructed. The outside of the nest is usually covered with coarse materials, apparently to give the effect of a pile of rubbish. Two eggs are usually laid in these cozy homes, but in rare instances three have been found. The Philippine Sun-bird of our illustration is a native of the Philippines and is found on nearly all the islands from Luzon to Mindanao. The throat of the male has a beautiful iridescence shaded with green, while that of the female, shown on the nest, is yellow.

THE RED-RUMPED TANAGER*

An American family, the tanagers are mostly birds of very brilliant plumage. There are 300 species, a few being tropical birds. They are found in British and French

Guiana, living in the latter country, in open spots of dwellings, and feeding on bananas and other fruits. They are also said to do much harm in the rice fields.

Mr. George K. Cherrie, of the Field Museum, says of the Red-rumped Tanager:

"During my stay at Boruca and Palmer (the last of February) the breeding season was at its height, and I observed many of the Costa Rica red-rumps nesting. In almost every instance where possible I collected both parents of the nests, and in the majority of cases found the males wearing the same dress as the females. In a few instances the male was in fully adult plumage—velvety black and crimson red. From the above it is clear that the males begin to breed before they attain fully adult plumage, and that they retain the dress of the female until, at least, the beginning of the second year.

"While on this trip I had many proofs that, in spite of its rich plumage and being a bird of the tropics, it is well worthy to hold a place of honor among the song-birds. And if the bird chooses an early hour and a secluded spot for expressing its happiness, the melody is none the less delightful."

THE SWALLOW-TAILED INDIAN ROLLER*

Swallow-Tailed Indian Rollers are natives of northeastern Africa and Senegambia, and also the interior of the Niger district. The bird is so called from its way of occasionally rolling or turning over in its flight, somewhat after the fashion of a tumbler pigeon. A traveler, in describing the habits of the Roller family, says:

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SWALLOW-TAILED INDIAN ROLLER.

½ Life-size.

MEXICAN MOT MOT.

(Momotus swainsoni).

In Lifeside.

"On the 12th of April I reached Jericho alone, and remained there in solitude for several days, during which time I had many opportunities of observing the grotesque habits of the roller. For several successive evenings great flocks of rollers mustered shortly before sunset on some dona trees near the fountain, with all the noise but without the decorum of rooks. After a volley of discordant screams, from the sound of which it derives its Arabic name of 'schurkrak,' a few birds would start from their perches and commence overhead a series of somersaults. In a moment or two they would be followed by the whole flock, and these gambols would be repeated for a dozen times or more.

"Everywhere it takes its perch on some conspicuous branch or on the top of a rock, where it can see and be seen. The bare tops of the fig trees, before they put forth their leaves, are in the cultivated terraces, a particularly favorite resort. In the barren Ghor I have often watched it perched unconcernedly on a knot of gravel or marl in the plain, watching, apparently, for the emergence of beetles from the sand. Elsewhere I have not seen it settle on the ground."

THE MEXICAN MOT MOT*

Mot mots are peculiar to the New World, being found from Mexico throughout the whole of Central America and the South American continent. The general plumage is green, and the majority of the species have a large racket at the end of the center tail feathers, formed by the bird itself.

The houton (so called from his note), according to

Waterson, ranks high in beauty among the birds of Demerara. This beautiful creature seems to suppose that its beauty can be increased by trimming its tail, which undergoes the same operation as one's hair in a barber shop, using its own beak, which is serrated, in lieu of a pair of scissors. As soon as its tail is fully grown, he begins, about an inch from the extremity of the two longest feathers in it, and cuts away the web on both sides of the shaft, making a gap about an inch long. Both male and female wear their tails in this manner, which gives them a remarkable appearance among all other birds.

To observe this bird in his native haunts one must be in the forest at dawn. He shuns the society of man. The thick and gloomy forests are preferred by the houton. In those far-extending wilds, about daybreak, you hear him call in distinct and melancholy tone, "Houton, houton!" An observer says: "Move cautiously to the place from which the sound proceeds and you will see him sitting in the underwood, about a couple of yards from the ground, his tail moving up and down every time he articulates "Houton!"

The mot mot lives on insects and berries found among the underwood, and very rarely is seen in the lofty trees. He makes no nest, but rears his young in a hole in the sand, generally on the side of a hill.

EGGS.

Life-size.

1. Spotted Sandpiper. 2. Bartramian Sandpiper. 3. Marbled Godwit. 4. King Rail. 5. American Coot. 6. Least Tern. 7. Sooty Tern. 8. Common Murre. 9. Black Tern. 10. Herring Gull.

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CHAPTER XXIII

EGGS AND FEATHERS

1. PROTECT THE EGGS OF THE BIRDS

ELIZABETH NUNEMACHER, in *Our Animal Friends,* writes thus of her observation of birds. Would that her suggestions for their protection might be heeded.

"Said that artist in literature, Thomas Wentworth Higginson: 'I think that, if required, on point of death, to name instantly the most perfect thing in the universe, I would risk my fate on a bird's egg; . . . it is as if a pearl opened and an angel sang.' But far from his beautiful thought was the empty shell, the mere shell of the collector. How can he be a bird-lover who, after rifling some carefully tended nest, pierces the two ends of one of these exquisite crusts of winged melody, and murderously blows one more atom of wings and song into nothingness? The inanimate shell, however lovely in color, what is it? It is not an egg; an egg comprehends the contents, the life within. Aside from the worthlessness of such a possession, each egg purloined means we know not what depth of grief to the parent, and a lost bird life; a vacuum where song should be.

"People who love birds and the study of them prefer half an hour's personal experience with a single bird to a whole cabinet of 'specimens.' Yet a scientist recently confessed that he had slain something like four hundred and

seventy-five redstarts, thus exterminating the entire species from a considerable range of country, to verify the fact of a slight variation in color. One would infinitely prefer to see one redstart in the joy of life to all that scientific lore could impart regarding the entire family of redstarts by such wholesale butchery, which nothing can excuse.

"We hear complaints of the scarcity of bluebirds from year to year. I have watched, at intervals since early April, the nest of a single pair of bluebirds in an old apple tree. On April 29th there were four young birds in the nest. On May 4th they had flown; an addition was made to the dwelling, and one egg of a second brood was deposited. On May 31st the nest again held four young bluebirds. June 15th saw this second quartette leave the apple tree for the outer world, and, thinking surely, that the little mother had done, I appropriated the nest; but on June 25th I found a second nest built, and one white egg, promising a third brood. From the four laid this time either a collector or a bluejay deducted one, and on July 14th the rest were just out of the shell. This instance of the industry of one pair of bluebirds proves that their scarcity is no fault of theirs. I may add that the gentle mother suffered my frequent visits and my meddling with her nursery affairs without any show of anger or excitement, uttering only soft murmurs, which indicated a certain anxiety. May not the eleven young bluebirds mean a hundred next season, and is not the possessor of the missing egg guilty of a dozen small lives?"

We have observed that the enthusiasm of boys for collecting eggs is frequently inspired by licensed "collectors" who are known in a community to possess many rare and

FROM COL. CHI. ACAD. SCIENCES

EGGS.
Life-size.

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1. Great Creasted Flycatcher. 2. King Bird. 3. Night Hawk. 4. Crow. 5. Red-headed Woodpecker. 6. Yellow-billed Cuckoo. 7. Audubon's Caracara. 8. Black-billed Magpie. 9. Kingfisher. 10. Screech Owl. 11. Turkey Vulture. 12. Gamble's Partridge. 13. Bob-White.

valuable specimens. Too many nests are despoiled for so-called scientific purposes, and a limit should be set to the number of eggs that may be taken by anyone for either private or public institutions. Let us influence the boys to "love the woodrose, and leave it on its stalk."

2. FEATHERS OR FLOWERS?

Was the question which confronted the fair sex this year when about to select their Easter hats or bonnets. "Say flowers," pleaded the members of the Audubon Society, and from the many fair heads, innocent of feather adornment, which bowed before the lily-decked altars on Easter morning, one must believe that the plea was heeded.

Nearly every large house in Chicago, dealing wholly or in part in millinery goods, was visited by a member of the Audubon Society, says the *Tribune*. One man who sells nothing but millinery declared that the bird protective association was nothing but a fad, and that it would soon be dead. He further said he would sell anything for hat trimming, be it flesh, fish, or fowl, that a *woman would wear*.

Touching the question whether the beautiful terns and gulls, with their soft gray and white coloring, were to be popular, it was said that they would not be used as much as formerly. One salesman said that he would try, where a white bird was requested, to get the purchaser to accept a domestic pigeon, which was just as beautiful as the sea and lake birds named.

The milliners all agree that the snowy egret is doomed to extermination within a short time, its plumes, so fairy-

like in texture, rendering its use for trimming as desirable in summer as in winter.

As to the birds of prey, people interested in our feathered friends are as desirous of saving them from destruction as they are to shield the song-birds. There are only a few of the hawks and owls which are injurious, most of them, in fact, being beneficial. Hundreds of thousands of these birds were killed for fashion's sake last fall, so that this coming season the farmer will note the absence of these birds by the increased number of rat, mouse, and rabbit pests with which he will have to deal.

It is a matter of congratulation, then, to the members of the Audubon Society to know that their efforts in Chicago have not been wholly fruitless, inasmuch as the majority of dealers in women's headgear are willing to confess that they have felt the effect of the bird protective crusade.

Dr. H. M. Wharton, pastor of Brantly Baptist Church, Baltimore, has always been a bitter opponent of those who slaughter birds for millinery purposes. "It is wholesale murder," said he, "and I am delighted that a bill is to be offered in the Maryland legislature for the protection of song-birds. I have commented from the pulpit upon the evil of women wearing birds' wings or bodies of birds on their hats, for I have long considered it a cruel custom."

"Birds are our brothers and sisters," said the Rev. Hugh O. Pentecost before the Unity Congregation at Carnegie Music Hall, Pittsburg, a few weeks ago. "If we are children of God, so are they. The same intelligence, life, and love that is in us is in them. The difference between us is not in kind, but in degree."

EGGS.

Life-size.

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1. Cat Bird. 2. Robin. 3. Chickadee. 4. Long-billed Marsh Wren. 5. Brown Thrasher. 6. Yellow Warbler. 7. Red-eyed Vireo. 8. Loggerhead Shrike. 9. Cedar Waxwing. 10. Cliff Swallow. 11. Martin. 12. Rose-breasted Grosbeak. 13. Scarlet Tanager. 14. Towhee. 15. Song Sparrow. 16. Chipping Sparrow. 17. Vesper Sparrow. 18. Great-tailed Grackle. 19. Bronzed Grackle. 20. Baltimore Oriole. 21. Orchard Oriole. 22. Meadow Lark. 23. Red-winged Blackbird. 24. Blue Jay. 25. Prairie Horned Lark. 26. Wood Pewee.

"How is this murderous vanity of women to be overcome?" asks *Our Animal Friends*. "We confess we do not know; but this we do know, that good women can make such displays of vanity disreputable, and that good women *ought to do it.*"

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